Senior 4 Consumer Mathematics (40S)
Standards Test

Administration Manual
for Supervising Teachers

Semester 2
2002–2003

Manitoba
Education
and Youth

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Preface

This *Administration Manual for Supervising Teachers* is distributed to teachers and administrators, and must be read prior to administering the standards test. The rules and guidelines in this manual must be strictly observed to ensure the consistency of standards test administration.

Please use this manual in conjunction with the registration package, the *Policies and Procedures for Standards Tests* handbook and the *Information Bulletin* to gain a full understanding of the protocols and procedures associated with this test. This manual contains general information about the test, step-by-step instructions for the test administration, and policies regarding absenteeism, lateness, violation of rules, etc.

If you encounter exceptional circumstances not addressed in this manual, or if you have further inquiries, contact Diane Courcelles, Administrative Officer, at 945-0831, or toll-free at 1 800 282-8069, extension 0831.

TABLE OF CONTENTS

Page

General Information 1
  Features of the test 2
  Test schedule 2
  Shipping Schedule 3
Policies for Standards Tests 4
  Adaptations 4
  Exemptions 4
  Re-read provisions 5
  Return of tests to students 5
  Test confidentiality 5
    Portfolio component 5
    Project component 5
    Written Test 5
  Student materials 6
    Portfolio component 6
    Project component 6
    Written Test 6
  Students leaving the room 7
  Late arrivals 7
  Student absences 7
    Portfolio component 7
    Project component 7
    Written Test 7
  Responding to student questions 8
  Student transfers from one school to another 8
    Transfers in 8
    Transfers out 8
  Violation of rules 9
  Damaged or misprinted materials 9
    On the Written Test administration date 9
    During Written Test administration 9
Responsibilities of School Principals 10
Responsibilities of Supervising Teachers 11

Checklist of Procedures (Portfolio) 15
    Advance Preparations 15
    Prior to the Portfolio component 15
    Beginning the Portfolio component 16
    During the Portfolio component 16
    Ending the Portfolio component 17
    Marking the Portfolio component 17
Checklist of Procedures (Project) 19
    Advance Preparations 19
    Prior to the Project component 19
    Session 1 20
    Session 2 20
    Session 3 20
    Marking the Project component 21
Checklist of Procedures (Written Test) 22
    Advance Preparations 22
    Prior to the Written Test 22
    Beginning the Written Test 23
    During the Written Test 23
    Ending the Written Test 23
    Marking the Written Test 24
Submitting Test Materials 25
  School-based Marking and Centralized Marking (one or more components scored at a central location) 25
    Before marking 25
    After marking 25
  Classroom-based Marking (all three components scored by classroom teacher) 26
  Shipping materials to the department 27
Appendix I: Written Test Rules 31
Appendix II: Sample Generic Demographic Data Form 32
Appendix III: Sample Attendance Form 33
Appendix IV: List of Reason Codes to Record Changes in Standards Test Student Registration Numbers 34

General Information

Manitoba Education and Youth develops all standards tests in collaboration with teachers from across the province. This standards test is based on the student learning outcomes and standards found in the *Senior 4 Mathematics: Manitoba Curriculum Framework of Outcomes and Draft Senior 4 Standards* (2000) document.

The standards test is locally marked and counts for 30% of each student's final grade in the course. Marking instructions are provided by the department immediately following test administration. Student results on the test are released to students according to local policy on the date designated by local jurisdictions.

All students enrolled in Senior 4 Consumer Mathematics (40S), except those who have been exempted, must write all three components of the standards test during the scheduled dates and times. **Students enrolled in Senior 4 Consumer Mathematics (45A) and (45B) are not eligible to write the standards test.**

All schools should receive the test materials for each part of the test prior to the test administration date. Principals of public schools receive test materials from their division offices. Principals of independent and band-operated schools receive test materials directly from the Assessment and Evaluation Branch.

The number of test booklets sent to each school is based on the February 21, 2003 registration information provided by the school. Please advise Diane Courcelles, Administrative Officer, at 945-0831, or toll-free at 1 800 282-8069, extension 0831, immediately if the number of students registered to write the test has increased since registration.

In the context of marking standards tests at the local level, Manitoba Education and Youth:

- trains representatives from local jurisdictions to act as local marking co-ordinators;
- collects and scans all marker sheets from jurisdictions to provide them with test result summaries; and
- supports provincially-funded local jurisdictions by providing $10.00 for each locally-marked test administered in accordance with the test schedule on page 2.

Features of the test

All students seeking credit in Senior 4 Consumer Mathematics (40S) this semester must write all three components of the standards test during the scheduled dates and times.

The Senior 4 Consumer Mathematics (40S) Standards Test consists of a Portfolio and Project both valued at 30% each, and a Written Test valued at 40% of the total standards test. Overall, the standards test accounts for 30% of each student's final mark.

English or French versions of the test are available for students enrolled in Senior 4 Consumer Mathematics (40S) or "Mathématiques du consommateur de secondaire 4 (40S)". The test is administered and locally scored and includes an optional Portfolio interview.

The provincial standards test is based on the student learning outcomes and standards found in the *Senior 4 Mathematics: Manitoba Curriculum Framework of Outcomes and Draft Senior 4 Standards* (2000) document, and is consistent with the test specifications outlined in the *Information Bulletin*. A copy of the *Information Bulletin* is conveniently posted on the Manitoba Education and Youth website at http://www.edu.gov.mb.ca/ks4/assess/publications.html.

Please note that a *Demographic Data Form* must be completed by each student at the time of the Portfolio component (see sample Appendix II, p. 32).

Test schedule

The following table summarizes the schedule for the Senior 4 Consumer Mathematics (40S) Standards Test:

Date	Component	Preparation Time	Time Required for Administration
Between May 5 and 16, 2003	Project	10 minutes preparation and instructions	three 60-minute sessions
Completed prior to June 9, 2003 (recommendation)	Portfolio	as needed	as needed
Between 8:30 a.m. and 12:30 p.m. morning of June 9, 2003	Written Test	15 minutes preparation and instructions	90 minutes

Shipping Schedule

The three parts of the Senior 4 Consumer Mathematics (40S) Standards Test will arrive at schools/school divisions in separate shipments each semester. The following table summarizes the shipping schedule for Semester 2.

Semester 2	To: Schools/School Divisions
March 7	**Shipment #1: Early Semester** Administration Manual for Supervising Teachers Portfolio Folders Portfolio Guide for Teachers *Portfolio Scoring Sheets* *Demographic Data Forms* *Attendance Forms* *Student Registration Update Form* *Supervising Teacher Report*(s) Senior 4 Consumer Mathematics (40S) Standards Test: An Overview for Teachers Letter to principal and supervising teachers
April 28	**Shipment #2: Mid-Semester** *Project Resource Package* plus four extra Project *Resource Packages* *Project Scoring Sheets* Letter to principal Letter to superintendent of school division or district
May 16	**Shipment #3: Project Completion Date** *Project Scoring Guide* *Sample Response to Project* Letter to principal, supervising teachers and local marking co-ordinators
June 5	**Shipment #4: Late Semester** Sealed, shrink-wrapped bundle of *Written Test Student Booklets* plus one package of four extra *Written Test Student Booklets* *Written Test Resource Packages* (unnumbered and not shrink-wrapped) *Written Test Scoring Sheets* Bill of lading for jurisdictions outside the City of Winnipeg Labels—to be affixed when returning materials *Supervising Teacher Feedback Form* *Principal Feedback Form* *Local Marking Co-ordinator Feedback Form* Letter to principal Letter to superintendent of school division or district
June 9	**Shipment #5: Test Date** *Written Test Marking Guide*

Semester 2	**To: Manitoba Education and Youth**
June 20	**One Shipment: End of Semester** Student Results*: *Portfolio Scoring Sheets* *Project Scoring Sheets* *Written Test Scoring Sheets* Administrative Information: *Attendance Forms* *Demographic Data Forms* *Student Registration Update Forms* *Supervising Teacher Feedback Form* *Supervising Teacher Report* *Principal Feedback Form* *Local Marking Co-ordinator Feedback Forms* All damaged or misprinted booklets

*Please **do not** ship student booklets to Manitoba Education and Youth.

Policies for Standards Tests

Principals and supervising teachers should be aware that the *Policies and Procedures for Standards Tests* handbook has been distributed to all schools and is available on-line at http://www.edu.gov.mb.ca/ks4/access/publications.html. This handbook outlines current policies and procedures related to the administration of standards tests and reflects the principles and guidelines contained in *Principles for Fair Student Assessment Practices for Education in Canada* (1993).

Adaptations

Schools are asked to identify and submit requests for test adaptations **at the time of student registration**. These requests should be submitted on the *Request for Adaptations Form* included with the registration package. Following departmental review of the adaptation requests received, schools will be advised of the department's decision regarding these requests (see *Policies and Procedures for Standards Tests* handbook, Sections 4.0, 4.1 and 4.2).

Exemptions

Decisions for student exemptions that fall within the guidelines set out in the *Policies and Procedures for Standards Tests* handbook, (Sections 5.0, 5.1 and 5.2) are made at the school level and do not require departmental approval. Schools are required, however, to report school-based exemptions on the *Student Exemption Report* included with the registration package. If additional student exemptions are needed after the registration deadline date, an additional *Student Exemption Report* should be submitted as soon as possible.

For exemptions that fall outside the parameters of the policy and procedure guidelines, requests are to be made **at the time of student registration**. Please submit requests in writing to Ernest Molgat, Director, Assessment and Evaluation Branch, 71–1567 Dublin Avenue, Winnipeg, Manitoba R3E 3J5.

Re-read provisions

As the reporting of individual student scores on locally-marked standards tests is the responsibility of each local jurisdiction, the re-read policy for these tests is determined locally.

Return of tests to students

Local jurisdictions decide whether to keep the test booklets or return them to students.

Test confidentiality

Test materials must be kept secure and sealed until administration.

Written Test Student Booklets and *Project Resource Packages* must not be reproduced nor information from them be communicated in any way until test administration is completed.

The marking packages are to be stored in a secure location until the test administration is complete.

Portfolio component

The Portfolio Package may be opened by teachers at any time. Teachers are required to photocopy sufficient quantities of the *Student Organizer Sheet* and Explanation Sheets for the number of registered students. All Portfolio Folders, scoring sheets, *Demographic Data Forms* and *Attendance Forms* must be accounted for and returned to a secure location in the school between test sessions.

Project component

Project Resource Packages are to be kept secure until the morning of May 5, 2003, at which time the sealed packages may be opened by teachers. All resource packages (**used or unused**) must be accounted for and returned to a secure location in the school between test sessions.

Written Test

Bundles of the *Written Test Student Booklets* and the *Written Test Resource Packages* are to be kept secure until the morning of June 9, 2003, at which time the sealed test bundles may be opened by teachers. All **used** test booklets must be accounted for and packaged for local marking.

Student materials

Portfolio component

Students should be instructed to work on their portfolios over time. It is recommended that extra copies of the Explanation Sheets be available to students.

The Portfolio Folders (with pre-printed booklet numbers) should be kept in a secure location in the school until students are ready to insert their Explanation Sheets with work samples and submit the Portfolio for marking.

Project component

Although the *Project Resource Package* contains sufficient research materials for students to complete the Project component, students may use any available resources and may research their Project between work periods. All *Project Resource Packages* must remain in a secure location in the school at all times.

At the end of session 3, students submit their handwritten, typed or printed Project reports together with their *Project Resource Packages*. Student names should not appear on submitted materials. *Project Resource Packages* should be retained by the teacher until final marks have been released.

Written Test

Students may use the following materials during Written Test:

- HB lead pencil
- eraser
- ruler
- calculator (non-graphing)

Students should be cautioned that calculators may not be shared during the Written Test and calculator batteries should be checked before the test begins.

Students are not permitted to exchange materials during the Written Test.

The following materials must **not** be used during the test:

- dictionaries
- graphing calculators
- notes or textbooks

Students leaving the room

Students are expected to remain in the room for a minimum of 45 minutes for the Written Test.

However, any student who must temporarily leave and re-enter the room should be accompanied by a replacement supervisor. This practice ensures that the supervising teacher can remain in the test room with the students at all times.

Late arrivals

To avoid the opportunity for students to relay information during the Written Test, students may not enter the test room after the first 15 minutes of the Written Test administration.

Student absences

Portfolio component

Interview approach

Students absent for their Portfolio interview may be permitted a re-scheduled interview at the discretion of the classroom teacher.

Contents approach

Students who do not submit a Portfolio on the due date stipulated by the classroom teacher may submit their work at a later date at the discretion of their teacher.

Project component

Students absent for any of the three sessions of the Project component of the standards test may be permitted a make-up session at the discretion of the classroom teacher. Make-up sessions must be administered using the same rules and procedures as regular test sessions.

Written Test

The Written Test **cannot** be administered at a later date.

Students who are absent on the day of the Written Test are governed by school or school division policy concerning student absences during final tests. The final mark for these students must be identified as a school-based assessment and evaluation practice only.

For the purpose of determining whether the requirement for a mandatory standards test has been met for graduation, completing 70% of the test (the Written Test plus one other component) will be deemed sufficient.

Responding to student questions

Avoid making any directing/guiding comments during the Written Test, other than those required for distribution of materials and instructions to students.

No explanations, translations, rephrasing, clarifying statements or comments of a similar nature may be provided about the test content. Classroom teachers can, however, provide clarification regarding test-taking rules or procedures.

If a student asks a question related to the Written Test content, a suggested response is, "I'm sorry. I can't answer your question. Do your best with it."

Suspected errors in printing or wording in the Written Test should not be communicated to students unless specific instructions are received from the Assessment and Evaluation Branch. You may however, contact Lorna Martin, Assessment Consultant, at 945-8075 or toll-free at 1 800 282-8069, extension 8075 to report any suspected errors.

Student transfers from one school to another

Transfers in

When a student transfers into the school after completing the Portfolio or Project component in another school, the receiving supervising teacher records the new student on the *Student Registration Update Form*. The student completes a new *Demographic Data Form*. The receiving school should request the **original** *Portfolio Scoring* (scan) *Sheet* and/or the *Project Scoring* (scan) *Sheet* from the previous school.

The receiving school will need the scoring (scan) sheets to calculate a total mark for the Senior 4 Consumer Mathematics (40S) Standards Test.

The Assessment and Evaluation Branch will combine the scores for the student from both schools to create a report for the school in which the student is currently registered.

Department funding of $10.00 for each locally-marked test will be based on where the student completed the Written Test.

Transfers out

When a student transfers out of the school after completing the Portfolio or Project component, record the student's name on the *Student Registration Update Form*.

Provide the receiving school with the **original** scoring (scan) sheets. The receiving school will need the score on the Portfolio and/or Project component to calculate a total mark for the Senior 4 Consumer Mathematics (40S) Standards Test.

Violation of rules

The *Written Test Rules* are read aloud to students by the supervising teacher immediately before the Written Test (see Appendix I, p. 31).

Document any violation of rules on the *Supervising Teacher Report*. This documentation should include:

- the test booklet number; and
- a description of the circumstances, including available evidence.

The student may be permitted to complete the test.

The consequences of any violation of rules are a local decision.

Damaged or misprinted materials

Students should be assured that they will not be penalized for any obvious error in printing or wording. Local marking co-ordinators will be advised of any known errors before the marking session. Return the unused damaged booklet(s) with the reports and forms being sent to the department after the marking session.

On the Written Test administration date

If a damaged or misprinted Written Test booklet is discovered **at the start** of the test session:

- replace the damaged or misprinted test booklet with a new test booklet; and
- print "DAMAGED" on the test booklet cover and on the *Attendance Form*.

During Written Test administration

If a damaged or misprinted test booklet is discovered **during** the writing of the test:

- give the student a new test booklet (the student keeps the damaged test booklet until the end of the session);
- instruct the student to continue responding to test items in the new test booklet;
- collect both test booklets at the end of the test session;
- cross out the existing booklet number on the undamaged test booklet and change it to the original booklet number so that **all student responses are recorded under the original booklet number**;

- indicate on the *Attendance Form* that two booklets have been used for one student (see Appendix III, p. 33);
- record the damaged or misprinted test booklet number on the *Supervising Teacher Report*, and
- ensure both booklets are kept together by bundling with an elastic band.

Responsibilities of School Principals

It is the responsibility of principals to ensure that all components of the standards test are kept confidential until the test administration is completed.

Other responsibilities are listed below.

If test packages are not in the school on schedule:

- public school principals should contact their superintendent;
- principals of independent and band-operated schools should contact Diane Courcelles, Administrative Officer, at 945-0831, or toll-free at 1 800 282-8069, extension 0831.

Use the *Packing Lists* to confirm that all materials have been received. Count the shrink-wrapped test booklets and resource packages to ensure that there are enough booklets for the number of students writing the test. Keep the shrink-wrapped test packages unopened until the morning of the Written Test. If additional test materials are needed, immediately contact Diane Courcelles, Assessment Consultant, at the previously mentioned number.

Store all test materials in a secure area in the school.

Provide supervising teachers with a listing of the Manitoba Education and Youth (MET) numbers for the students registered to write the test. Call the Professional Certification and Student Records Unit at 1 800 667-2378 to obtain MET numbers for new students.

Make arrangements to meet the requirements of the adaptations approved for students (see Adaptations, p. 4 of this manual and *Policies and Procedures for Standards Tests* handbook, Sections 4.0, 4.1 and 4.2).

Co-ordinate test scheduling and space requirements.

Minimize the frequency of school announcements during the Written Test.

Ensure that a replacement supervisor is available to accompany students who must temporarily leave the room.

Provide the *Project Resource Packages* and the Written Test materials to the supervising teacher on the morning of the designated days.

Complete the *Principal Feedback Form* before the end of the Written Test session.

Advise the Assessment and Evaluation Branch of school closures or suspended school bus transportation services that occur on the test date(s) as a result of unusual or extenuating emergency circumstances or extreme inclement weather conditions. Please contact Lorna Martin, Assessment Consultant, at 945-8075 or toll-free at 1 800 282-8069, extension 8075.

Responsibilities of Supervising Teachers

Supervising teachers administer the test using the step-by-step procedures outlined in the following three checklists in this manual. There is a separate checklist for each component of the standards test.

Checklists

Points to Remember

- Ensure that once a standards test (booklet) number* has been assigned to a student, all materials distributed to that student have the same booklet number.
- Remain in the classroom throughout each part of the standards test and engage in work solely related to the duties of supervising the test.
- A replacement supervisor must be available to assist you.
- Store all documents not in use in a secure area in the school.
- Students may **not** have access to their *Project Resource Packages* between sessions.
- Students may **not** use anything produced outside of class during the Written Test.

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* All students receive a standards test (booklet) number during the Portfolio component based on the pre-printed booklet number on their Portfolio Folder. Each student must have the same standards test (booklet) number on all materials pertaining to the three parts of the test.

Checklist of Procedures (Portfolio)

(check ✔)	**Advance Preparations**
	1. Ensure that:
	• appropriate scheduling and space allocation for the Portfolio component has occurred
	• the Portfolio materials have been received
	• a list of MET numbers for students registered for the standards test is available
	2. Photocopy sufficient quantities of the *Student Organizer Sheet* and Explanation Sheets for the number of students writing the test:
	• *Student Organizer Sheet* (1 per student)
	• *Career/Life Project—Explanation Sheet* (1 per student)
	• *Personal Income Tax Form—Explanation Sheet* (1 per student)
	• *Student Choice—Explanation Sheets* (3 per student)
	3. Notify students in advance of the:
	• date and time of the Portfolio component for the interview approach (as applicable)
	• date and time of the submission of the Portfolio component for the contents approach (as applicable)
	• material(s) needed for the Portfolio
	• need for each student to record and retain the standards test (booklet) number assigned to them (located on the *Attendance Forms*). Students must use the assigned number for all three components of the standards test.
(check ✔)	**Prior to the Portfolio component**
	1. Ensure that your materials are available:
	• *Packing List*
	• *Portfolio Folders* (1 per student, pre-printed with individual student booklet numbers)
	• *Student Organizer Sheet* (1 per student)
	• *Career/Life Project—Explanation Sheet* (1 per student)
	• *Personal Income Tax Form—Explanation Sheet* (1 per student)
	• *Student Choice—Explanation Sheets* (3 per student)
	• *Attendance Forms*
	• *Portfolio Scoring* (scan) *Sheets*
	• *Demographic Data Forms* (in envelope provided for storage)
	• *Administration Manual for Supervising Teachers* (this document)

(check ✔)	**Beginning the Portfolio component**
	1. Distribute:
	• *Portfolio Folder* (1 per student)
	• *Student Organizer Sheet* (1 per student)
	• *Career/Life Project—Explanation Sheet* (1 per student)
	• *Personal Income Tax Form—Explanation Sheet* (1 per student)
	• *Student Choice—Explanation Sheets* (3 per student)
	• *Demographic Data Form* (1 per student)
	2. Circulate the *Attendance Form* so students can print their names beside their standards test (booklet) number. They will need this number to write on their *Demographic Data Form* and each Portfolio explanation sheet. Note: The *Attendance Form* is the only record connecting students' identities to all three components of the Senior 4 Consumer Mathematics (40S) Standards Test.
	3. Supervise the completion of the *Attendance Form* by ensuring that students print their name beside their standards test (booklet) number.
	4. Read instructions for completing the *Demographic Data Forms* printed on the top left corner of the form. Direct students to print and shade in all information requested on the *Demographic Data Form*. Remind students of the importance of accurately recording the Program Information (English, French Immersion or Français).
	5. Instruct students to write their standards test (booklet) number on each of their Portfolio explanation sheets. (This number is also used for the Project and Written Test.)
	6. Instruct students to ensure that the standards test (booklet) number recorded on their *Demographic Data Form* is accurate **and** the same as the number recorded on the Portfolio explanation sheets.
	7. Collect and stack the *Demographic Data Forms* in numerical order.
	8. Collect and stack the *Portfolio Folders* in numerical order.
	9. Read aloud the *Student Organizer Sheet*.
	10. Remind students:
	• which scoring approach you will be using for the Portfolio component (contents or interview)
	• they will submit the Portfolio explanation sheets with five work samples prior to June 9, 2003

(check ✔)	**During the Portfolio component**
	1. Students who are present will have signed the *Attendance Form*. Remember to add the name of any student(s) absent at the session for the distribution of the Portfolio materials.
	2. Ensure that each student absent at the session for the distribution of Portfolio materials completes a *Demographic Data Form*.

	3. Verify that all the information on each *Demographic Data Form* is accurately printed and shaded. Ensure that the section asking for Program Information is accurate and complete.
	4. Place all used *Demographic Data Forms* in numerical order in the labelled envelope provided. Do not use elastic bands, staples or paper clips as these may damage the sheets. Store the forms in a secure location until they are to be forwarded to the Assessment and Evaluation Branch (after the Written Test is completed).
(check ✔)	**Ending the Portfolio component**
	1. Distribute the *Portfolio Folders*. Ensure that students have the same booklet number on their folder as recorded on the *Attendance Form*.
	2. As each student submits a Portfolio (contents approach) or completes an interview (interview approach), indicate with a "✔" in the "Portfolio Submitted" column of the *Attendance Form*. If a student does not submit a Portfolio or undergo an interview, leave a blank space for that student under the "Portfolio Submitted" column of the *Attendance Form*.
	3. As students submit the Portfolio (contents approach), ensure that the standards test (booklet) number on each explanation sheet matches the Portfolio Folder number.
	4. Ensure that the number of checkmarks in the "Portfolio Submitted" column matches the number of the Portfolio(s) submitted for the marking (contents approach) or matches the number of interviews completed (interview approach).
	5. Store the Portfolios (contents approach) and the *Portfolio Scoring* (scan) *Sheets* in a secure location until marking begins.
(check ✔)	**Marking the Portfolio component**
	1. a) Contents approach Retrieve the Portfolios and the *Portfolio Scoring* (scan) *Sheets* from the secure location. Ensure the standards test (booklet) number on the *Portfolio Folder* matches the *Portfolio Scoring Sheet*.
	b) Interview approach Retrieve the *Portfolio Scoring* (scan) *Sheets* from the secure location. Ensure the standards test (booklet) number on the *Portfolio Scoring Sheet* is accurate for the student being interviewed.
	2. Score the Portfolio component using the recommendations in the Portfolio component teacher package.
	3. Record student marks on the *Portfolio Scoring* (scan) *Sheets*. Keep a separate record of each student's results for your file.
	4. Place the *Portfolio Scoring* (scan) *Sheets* in numerical order in the envelope provided.
	5. Store *Portfolio Scoring* (scan) *Sheets* in a secure location until they are shipped to a local marking site, if a centralized model is used.

	6. Complete the *Student Registration Update Form* for any students who have transferred in or out of the school following the test registration date. Use the *List of Reason Codes to Record Changes in Standards Test Student Registration Number* provided in Appendix IV, p. 34.
	7. The student Portfolios (contents approach) remain with the school. They are **not** to be forwarded to a local marking site nor are they to be forwarded to Assessment and Evaluation Branch.

Store ALL standards test materials in a secure location. The materials are required for the remaining two parts of the standards test.

Checklist of Procedures (Project)

(check ✔)	**Advance Preparations**
	1. Check with your principal to ensure that:
	• appropriate scheduling and space allocation for the Project component has occurred
	• the Project materials itemized on the *Packing List* have been inventoried
	• arrangements have been made to accommodate the adaptations approved for any students
	2. Notify students in advance of the:
	• due date for submission of the Project report
	• dates and times of the three sessions of the Project component
	• materials needed to complete the Project report
	3. If there is more than one teacher supervising the test, photocopy the *Supervising Teacher Report* and the *Supervising Teacher Feedback Form.*
(check ✔)	**Prior to the Project component**
	1. Ensure that your materials are available:
	• *Packing List*
	• *Project Resource Packages*
	• *Attendance Forms*
	• *Demographic Data Forms* (for students who have arrived since the start of the Portfolio component)
	• *Student Registration Update Form*
	• *Project Scoring* (scan) *Sheets*
	• *Supervising Teacher Report*
	• *Supervising Teacher Feedback Form*
	• *Principal Feedback Form* (this form must be completed prior to the end of the Written Test)
	• *Administration Manual for Supervising Teachers* (this document)
	2. Count the *Project Resource Packages.* The number of packages should equal the number requested by the school plus additional packages. The amount should also match the number on the *Packing List.*
	• If you need to split a bundle of *Project Resource Packages* between classrooms, make a photocopy of the *Attendance Form.* **On your copy,** cross out the standards test (booklet) numbers that are not used in your classroom and forward these booklets to the supervising teacher who requires them.
	3. Ensure that students exempted from the Senior 4 Consumer Mathematics (40S) Standards Test are not present.

(check ✓)	**Session 1**
	1. Distribute the *Project Resource Packages*. Verify that the booklet number corresponds with the student's number on the *Attendance Form*.
	2. Use the *Attendance Form* to complete the section titled "Student Attendance During Project Sessions". Indicate that a student is absent by recording an "A" on the *Attendance Form*. Students absent for any of the three Project sessions may be granted a make-up session at the classroom teacher's discretion (see sample *Attendance Form*, Appendix III, p. 33).
	3. Ensure that any students who have not completed a *Demographic Data Form* do so at this time.
	4. Write the time and date of the next session on the board.
	5. Remind students of the Project report due date.
	6. Begin the Project brainstorming session by reading aloud the first two pages of the *Project Resource Package* ("Welcome To …").
	7. Instruct students to individually skim through the *Project Resource Package*.
	8. Allow students to orally share ideas related to the Project. Maintain an orderly discussion.
	9. At the conclusion of the session, collect and stack the *Project Resource Packages* in numerical order.
	10. Return the *Project Resource Packages* and any additional *Demographic Data Forms* to a secure location of the school. Place all additional *Demographic Data Forms* in numerical order with those already completed.
(check ✓)	**Session 2**
	1. Use the *Attendance Form* to indicate each student's presence or absence at Session 2.
	2. Ensure that any students who have not completed a *Demographic Data Form* do so at this time.
	3. Distribute the *Project Resource Packages*. Ensure that students have the same booklet as they had for Session 1.
	4. Ensure students work independently.
	5. At the conclusion of the session, collect and stack the *Project Resource Packages* in numerical order.
	6. Place all additional *Demographic Data Forms* in numerical order with those already completed.
	7. Return the *Project Resource Packages* and *Demographic Data Forms* to a secure location of the school.
(check ✓)	**Session 3**
	1. Use the *Attendance Form* to indicate each student's presence or absence at Session 3.
	2. Distribute the *Project Resource Packages*. Ensure that students have the same booklet as they had for Session 1 and Session 2.

	3. Ensure that any students who have not completed a *Demographic Data Form* do so at this time.
	4. Ensure students work independently.
	5. As students submit their reports for the Project component of the standards test, ensure that the standards test (booklet) number is clearly indicated and matches the information on the *Attendance Form* and the *Demographic Data Form*. **Each student must have the same standards test (booklet) number on all materials pertaining to the three components of the test.**
	6. Place a "✔" on the *Attendance Forms* in the "Project Submitted" column once students have submitted their Project report.
	7. Stack the students' Project reports in numerical order.
	8. Stack the *Project Resource Packages* in numerical order.
	9. Complete the *Student Registration Update Form* for any students who have transferred in or out of the school following the test registration date. Use the *List of Reason Codes to Record Changes in Standards Test Student Registration Number* provided in Appendix IV, p. 34.
	10. Complete the *Supervising Teacher Report*. Note any unusual circumstances on this report.
	11. Ensure that the number of check marks in the "Project Submitted" column on the *Attendance Form* matches your count of the student Project reports.
	12. Return the Projects (student reports) and *Project Resource Packages* to a secure location in the school. Place all additional *Demographic Data Forms* in numerical order with those already completed.

(check ✔)	**Marking the Project component**
	1. Score the Project component using the recommendations in the *Project Scoring Guide* and the *Sample Response to Project*.
	2. Record student marks on the *Project Scoring* (scan) *Sheets*. Keep a separate record of each student's results for your file.
	3. Place the *Project Scoring* (scan) *Sheets* in numerical order in the envelope provided.
	4. Store *Project Scoring* (scan) *Sheets* in the same secure location as the *Portfolio Scoring* (scan) *Sheets* until they are shipped to a local marking site, if a centralized model is used.
	5. Complete the *Student Registration Update Form* for any students who have transferred in or out of the school following the test registration date. Use the *List of Reason Codes to Record Changes in Standards Test Student Registration Number* provided in Appendix IV, p. 34.
	6. The student Projects remain with the school after marking. They are **not** to be forwarded to the Assessment and Evaluation Branch.

Store ALL standards test materials in a secure location. The materials are required for the upcoming Written Test.

Checklist of Procedures (Written Test)

(check ✔)	**Advance Preparations**
	1. Check with your principal to ensure that:
	• appropriate scheduling and space allocation for the Written Test has occurred
	• the Written Test materials itemized on the *Packing List* have been inventoried
	• a replacement supervisor is available to accompany students who must temporarily leave the room during the Written Test
	• arrangements have been made to accommodate the adaptations approved for students
	2. Ensure that all subject-related materials have been removed from the walls and boards.
	3. Notify students in advance of the:
	• time, location and duration of the Written Test
	• materials needed to write the Written Test (see p. 6)
	• *Written Test Rules* (see Appendix I, p. 31)
	• requirement to remain in the Written Test room for at least 45 minutes
	4. Ensure that you have extra supplies and that there is a functioning pencil sharpener and stapler in the room. Students must not exchange materials during the Written Test.
	5. If there is more than one teacher supervising the Written Test, photocopy the *Supervising Teacher Report* and *Supervising Teacher Feedback Form*.
	6. Review the sample forms in Appendices II and III (pages 32 and 33).

(check ✔)	**Prior to the Written Test**
	1. Ensure that your materials are available:
	• *Packing List*
	• *Written Test Student Booklets*
	• *Written Test Resource Packages*
	• *Attendance Forms* (already initiated during the Portfolio and Project components)
	• *Student Registration Update Form*
	• *Demographic Data Forms* (in envelope provided for storage)
	• extra copies (4) of the *Written Test Resource Package*
	• extra copies (4) of the *Written Test Student Booklet*
	• *Supervising Teacher Report*
	• *Supervising Teacher Feedback Form*
	• *Principal Feedback Form* (this form must be given to the principal and collected before returning test materials for marking)

	- *Administration Manual for Supervising Teachers* (this document)
	2. Count the *Written Test Student Booklets* and the *Written Test Resource Package* booklets. The number of test booklets should equal the number requested by the school plus four additional booklets. The amount should also match the number on the *Packing List*.
	3. If you need to split a bundle of Written Tests between classrooms, refer to the *Attendance Form*. **On your copy**, cross out the standards test (booklet) numbers that are not used in your classroom and forward these booklets to the supervising teacher who requires them.
	4. Arrange the desks as far apart as possible.
	5. Ensure that students exempted from writing the standards test are not present.
(check ✔)	**Beginning the Written Test**
	1. Use the *Attendance Form* to distribute:
	- *Written Test Student Booklets*
	- *Written Test Resource Packages*
	2. Read aloud to students the *Written Test Rules* (Appendix I, p. 31). Read aloud pages *i–iii* in the *Written Test Student Booklet*.
	3. **Instruct students to turn the page and begin. Record the start time on the *Supervising Teacher Report*.**
(check ✔)	**During the Written Test**
	1. Refer to the *Attendance Form* previously used to record students' attendance for the Portfolio and Project components. Use these forms to record a student's presence or absence for the Written Test (see sample *Attendance Form*, Appendix III, p. 33).
	2. **Retain a copy of the *Attendance Form* as this is the school's only record connecting student's identities to their Senior 4 Consumer Mathematics (40S) Standards Test results.**
	3. Verify that all the information on each *Demographic Data Form* is accurately printed and shaded. Place all used forms in numerical order followed by any unused forms in the labelled envelope provided. Do not use elastic bands, staples or paper clips on these forms as they may damage the sheets. Do not seal the envelope.
	4. After 45 minutes, advise students that they have 45 minutes remaining.
(check ✔)	**Ending the Written Test**
	1. Inform students that the Written Test has ended. Ask them to stop writing.
	2. Collect the *Written Test Student Booklets* and the *Written Test Resource Packages*.
	3. As students submit their test materials, ensure that each *Written Test Student Booklet* number matches the information on the *Attendance Form*. Each student must have the same number for all three components of the standards test.

	4. Place a check "✔" on the *Attendance Form* under the column headed "Written Test Booklet Submitted" as students submit their booklets.
	5. **Record the time students finish writing the test on the *Supervising Teacher Report*. Do not include the extra time given for late arrivals or for students with adaptations.**
	6. Stack the *Written Test Student Booklets* in numerical order.
	7. Complete the *Supervising Teacher Report*. Note any unusual circumstances on this report.
	8. Ensure that the number of check marks in the "Written Test Booklet Submitted" column on the *Attendance Form* matches your count of the *Written Test Student Booklets*.
	9. Complete the *Student Registration Update Form* for any students who have transferred in or out of the school following the test registration date. Use the *List of Reason Codes to Record Changes in Standards Test Student Registration Number* provided in Appendix IV, p. 34.
	10. Make one or two copies of the *Attendance Form* and *Supervising Teacher Report*(s). One copy of each must be retained by the school and one forwarded to the local marking site, if a centralized model is used.
	11. Collect the *Principal Feedback Form*.
	12. Complete the *Supervising Teacher Feedback Form*.
	13. Return all Written Test materials and feedback forms to the secure area in the school until the commencement of marking in your school or until materials are forwarded to the local marking site.
(check ✔)	**Marking the Written Test**
	1. a) Centralized Local Marking Store *Portfolio*, *Project* and *Written Test Scoring* (scan) *Sheets* in the same secure location until they are shipped to a local marking site. Follow the recommendations in the *Information for Local Marking of Senior 4 Consumer Mathematics (40S) Standards Test* and the *Written Test Marking Guide*.
	b) Individual Local Marking Follow the instructions in the *Written Test Marking Guide*.
	2. Record student marks on the *Written Test Scoring* (scan) *Sheets*. Keep a separate record of each student's results for your file.
	3. Place the *Written Test Scoring* (scan) *Sheets* in numerical order in the envelope provided.
	4. The student written test booklets remain with the school after marking. They are **not** to be forwarded to the Assessment and Evaluation Branch.

Prepare test materials from all three parts of the Senior 4 Consumer Mathematics (40S) Standards Test for shipping according to the instructions on the following pages.

Submitting Test Materials

Schools may use a variety of marking models for the Senior 4 Consumer Mathematics (40S) Standards Test. The shipping directions for test materials are specific to the marking model used.

School-based Marking and Centralized Marking (one or more components scored at a central location)

Before marking

It is essential that the following materials are packaged and forwarded **to the local marking site**, immediately after completion of the Written Test on June 9, 2003:

(check ✓)	
	• all student *Portfolio Scoring* (scan) *Sheets*;
	• all student *Project Scoring* (scan) *Sheets*;
	• all student *Written Test Scoring* (scan) *Sheets*;
	• **all used** *Written Test Student Booklets*;
	• copy of the *Attendance Forms*; and
	• copy of the *Supervising Teacher Report*.
	• original *Attendance Forms*;
	• **all used** *Demographic Data Forms*;
	• *Student Registration Update Form*;
	• *Supervising Teacher Report*;
	• *Supervising Teacher Feedback Form*;
	• *Principal Feedback Form*; and
	• all damaged or misprinted booklets.

After marking

When local marking is done at a school or a central location, the Local Marking Co-ordinator is responsible for sending the materials to the Assessment and Evaluation Branch (see shipping instructions, p. 27).

After local marking is completed for all components of the standards test, prepare a package for return to **Assessment and Evaluation** no later than June 20, 2003. Include all materials listed on page 26.

Classroom-based Marking (all three components scored by classroom teacher)

When local marking is done at the classroom level, the teacher is responsible for sending the materials to the Assessment and Evaluation Branch (see shipping instructions below).

After local marking is completed for all components of the standard test, prepare a package for return to the Assessment and Evaluation Branch no later than June 20, 2003.

The package must include:

(check ✓)	
	• original *Attendance Forms*;
	• **all used** *Demographic Data Forms*;
	• *Student Registration Update Form*;
	• *Supervising Teacher Report*;
	• *Supervising Teacher Feedback Form*;
	• *Principal Feedback Form*;
	• *Portfolio Scoring* (scan) *Sheets*;
	• *Project Scoring* (scan) *Sheets*;
	• *Written Test Scoring* (scan) *Sheets*;
	• *Local Marking Co-ordinator Feedback Form*; and
	• all damaged or misprinted booklets.

Shipping materials to the department

Jurisdictions within the City of Winnipeg send packages directly to the Assessment and Evaluation Branch via Mid-Canada Courier (989-5630). The person placing the call should quote **account number E901,** give the jurisdiction name, address, and the name of the contact person.

Jurisdictions outside the City of Winnipeg return their package by Xpresspost. It is very important to package all materials in **one Xpresspost Flexipack envelope** whenever possible.

After the package is sealed, deliver it to the local post office.

We have provided sufficient materials for the return of **one** envelope/package. If you must send a second envelope/package, photocopy the mailing address label and affix the copy to the second package. Note you must use a photocopy of the mailing address label as it provides Canada Post with billing information. Ask the postal clerk for an additional bar code label to attach to the second envelope/package. Ensure that the school representative retains the bar code number in case tracing the package is required.

Return **all** required sheets and forms on or before June 20, 2003. Payments for local marking will be made according to the number of tests marked, based on the local marking scan sheets received.

Appendices

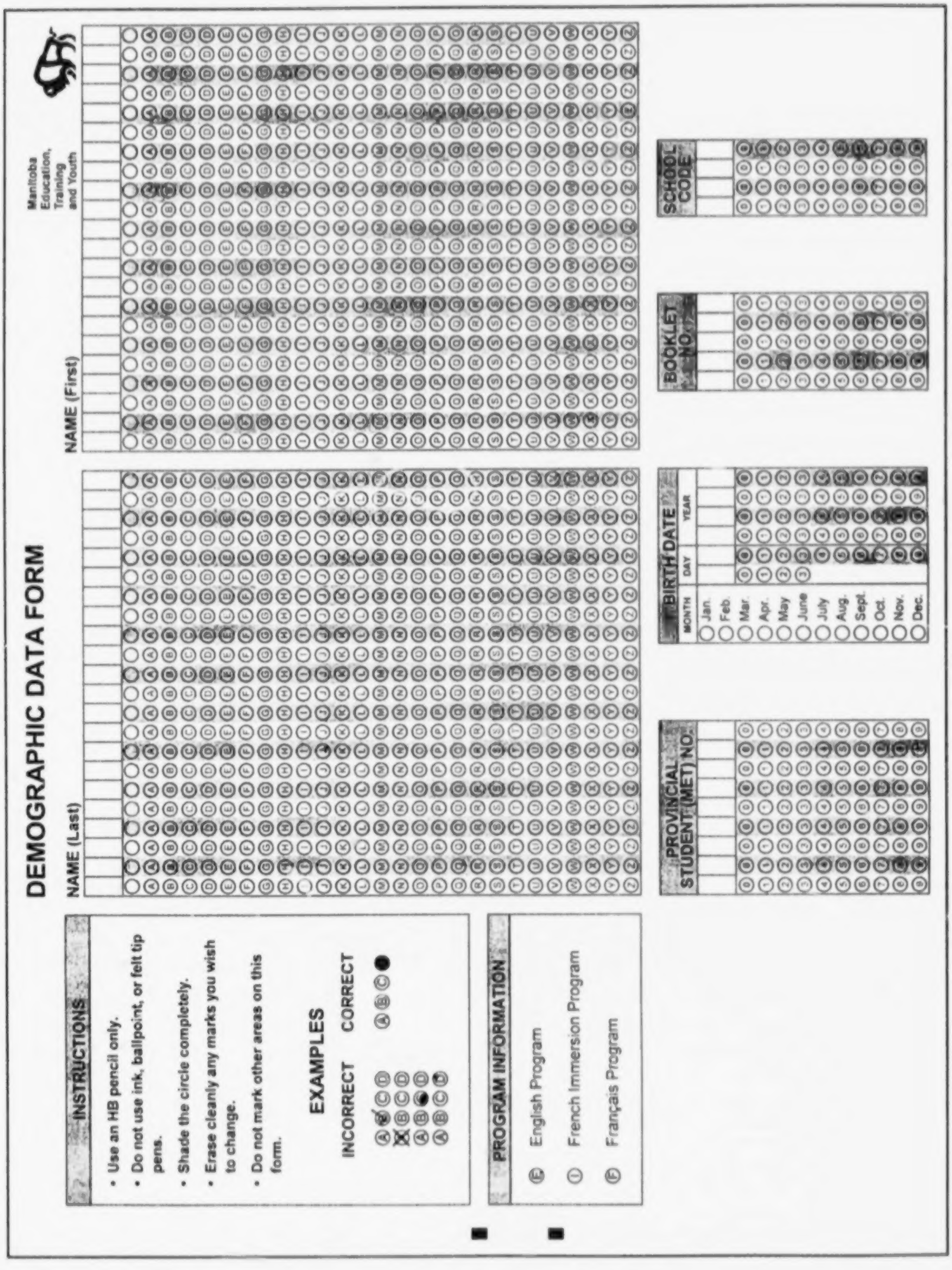
Appendix I: Written Test Rules

Senior 4 Consumer Mathematics (40S) Standards Test

The supervising teacher is expected to read these rules aloud to students at the beginning of the Senior 4 Consumer Mathematics (40S) Standards Test—Written Test:

- Check the title of your *Written Test Resource Package* and *Written Test Student Booklet*. Make certain that the number of your test booklet corresponds with the number that you used for your Portfolio and Project booklets.
- During this test session, do not proceed until instructed to do so.
- If you receive a damaged or misprinted booklet, return it to receive another booklet.
- You will not be permitted to leave the test room until **45 minutes** of test time has elapsed. (You may leave before that time in exceptional circumstances such as illness, when accompanied by a supervisor.)
- At the beginning of the session you should have a *Written Test Student Booklet*, a *Written Test Resource Package*, an HB lead pencil, an eraser, a ruler and a calculator. No other materials are permitted. Test materials and calculators are not to be exchanged.
- You will not give assistance to, nor receive assistance from another student. If you require something during the test, raise your hand and I will come to you.
- Do not ask questions or request explanations with regard to the content of the questions on the test.
- Do **not** identify yourself or your school, teacher or town in your test booklet.
- When I ask you to stop writing put your pencil down immediately.
- You may not discard any materials. The *Written Test Student Booklet* must remain intact. Any extra paper used must be stapled into the test booklet on the appropriate page. You may **not** leave the room with any materials pertaining to the test.

Appendix II: Sample Generic Demographic Data Form



DEMOGRAPHIC DATA FORM

Manitoba
Education,
Training
and Youth

INSTRUCTIONS

- Use an HB pencil only.
- Do not use ink, ballpoint, or felt tip pens.
- Shade the circle completely.
- Erase cleanly any marks you wish to change.
- Do not mark other areas on this form.

EXAMPLES

INCORRECT CORRECT

PROGRAM INFORMATION

Ⓔ English Program

Ⓘ French Immersion Program

Ⓕ Français Program

NAME (Last)

NAME (First)

PROVINCIAL STUDENT (MET) NO.

BIRTH DATE

MONTH DAY YEAR

○ Jan.
○ Feb.
○ Mar.
○ Apr.
○ May
○ June
○ July
○ Aug.
○ Sept.
○ Oct.
○ Nov.
○ Dec.

BOOKLET NO.

SCHOOL CODE

Appendix III: Sample Attendance Form

Page _____ of _____

School Number: 9999
School Name
School Address
School City and Postal Code

ATTENDANCE FORM—SEMESTER 2 2002–2003

Senior 4 Consumer Mathematics (40S) Standards Test

Booklet Number	Student Name (Please Print)	*Demographic Data Form* Submitted (check ✔)	Portfolio Submitted (check ✔)	Student Attendance During Project Sessions[1]			Project Submitted (check ✔)	Written Test[2] Booklet Submitted (check ✔)
				S1	S2	S3		
10001	SANDRA WONG	✔	✔	✔	✔	A	✔	
10002	KEVIN MELNYCHUK	✔	✔	✔	A	A		✔
10003	DAMAGED							
10004	DALLAS SEVERN	✔	✔	✔	✔	A	✔	✔
10005	MANUEL SOUSA	✔		✔	A^M	✔	✔	✔
10006	ROBERT SMITH	✔	✔	✔	✔	✔	✔	✔
10007	UNUSED							
~~10008~~	Used with 10004 (damaged)							
~~10009~~	Used in another classroom							
~~10010~~	Used in another classroom							

[1] ***For each Project session, record a "✔" for Present. An "A" indicates a student is Absent. "A^M" indicates student absence and make-up session held later.*** Make-up sessions may be conducted at the classroom teacher's discretion **for the Project component only**.

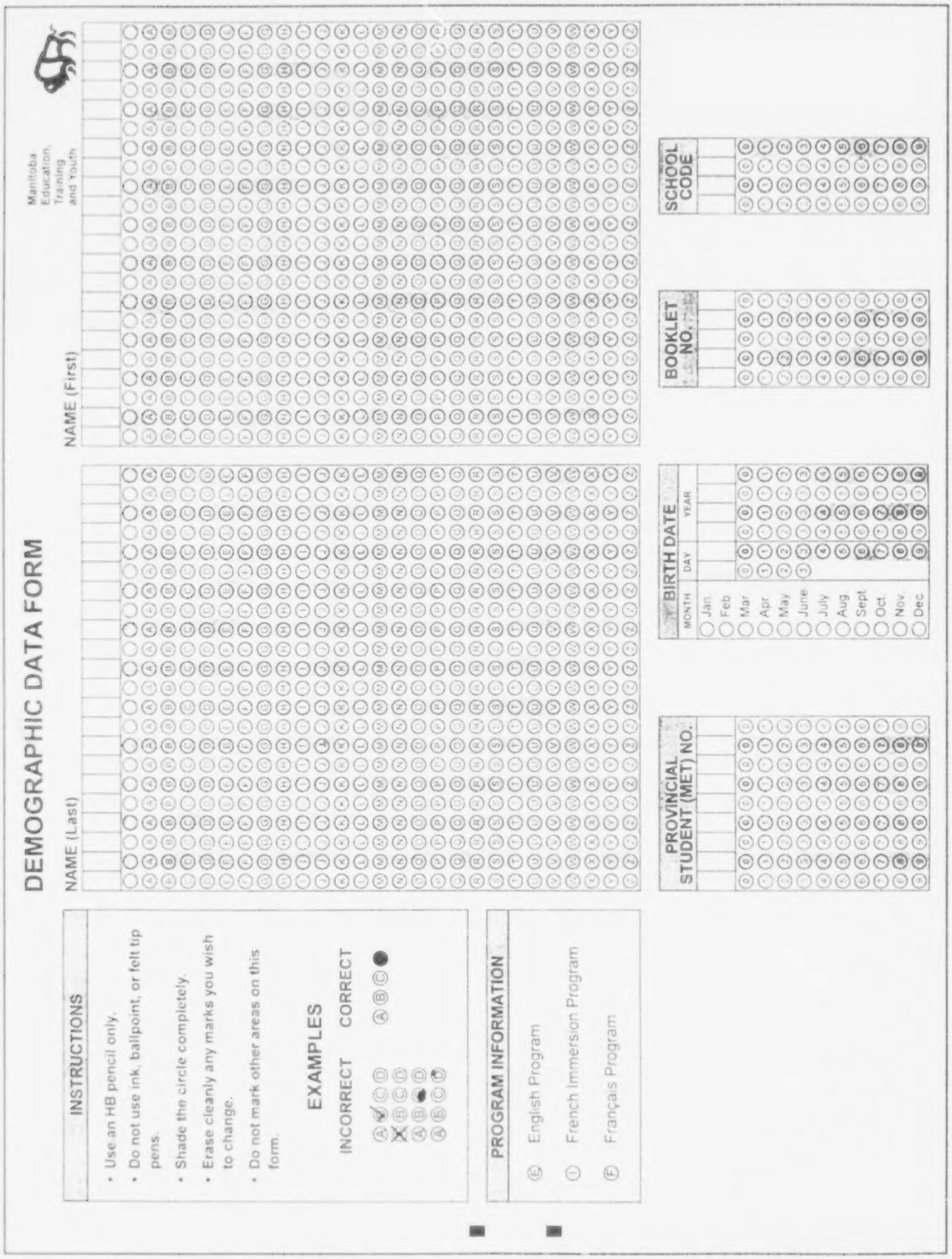
[2] ***There are no make-up sessions for the Written Test.***

Karen Booth

Supervising Teacher's Name *(please print)*

Please ensure that copies of this form are retained for your records. You will need this form to link your locally marked test with a student's name.

Appendix II: Sample Generic Demographic Data Form



Manitoba Education, Training and Youth

DEMOGRAPHIC DATA FORM

NAME (Last)

NAME (First)

INSTRUCTIONS

- Use an HB pencil only.
- Do not use ink, ballpoint, or felt tip pens.
- Shade the circle completely.
- Erase cleanly any marks you wish to change.
- Do not mark other areas on this form.

EXAMPLES

INCORRECT

CORRECT

Ⓐ Ⓑ Ⓒ ●

PROGRAM INFORMATION

Ⓔ English Program

Ⓘ French Immersion Program

Ⓕ Français Program

PROVINCIAL STUDENT (MET) NO.

BIRTH DATE

MONTH DAY YEAR

○ Jan.
○ Feb
○ Mar
○ Apr.
○ May
○ June
○ July
○ Aug.
○ Sept
○ Oct.
○ Nov.
○ Dec

BOOKLET NO.

SCHOOL CODE

Appendix III: Sample Attendance Form

Page _____ of _____

School Number: 9999
School Name
School Address
School City and Postal Code

ATTENDANCE FORM—SEMESTER 2 2002–2003

Senior 4 Consumer Mathematics (40S) Standards Test

Booklet Number	Student Name (Please Print)	*Demographic Data Form* Submitted (check ✔)	Portfolio Submitted (check ✔)	Student Attendance During Project Sessions[1]			Project Submitted (check ✔)	Written Test[2] Booklet Submitted (check ✔)
				S1	S2	S3		
10001	SANDRA WONG	✔	✔	✔	✔	A	✔	
10002	KEVIN MELNYCHUK	✔	✔	✔	A	A		✔
10003	DAMAGED							
10004	DALLAS SEVERN	✔	✔	✔	✔	A	✔	✔
10005	MANUEL SOUSA	✔		✔	A^{M}	✔	✔	✔
10006	ROBERT SMITH	✔	✔	✔	✔	✔	✔	✔
10007	UNUSED							
~~10008~~	Used with 10004 (damaged)							
~~10009~~	Used in another classroom							
~~10010~~	Used in another classroom							

[1] ***For each Project session, record a "✔" for Present. An "A" indicates a student is Absent. "A^{M}" indicates student absence and make-up session held later.*** Make-up sessions may be conducted at the classroom teacher's discretion **for the Project component only**.

[2] ***There are no make-up sessions for the Written Test.***

Karen Booth

Supervising Teacher's Name *(please print)*

Please ensure that copies of this form are retained for your records. You will need this form to link your locally marked test with a student's name.

Appendix IV: List of Reason Codes to Record Changes in Standards Test Student Registration Numbers

(Please use these codes to complete the *Student Registration Update Form* when returning to the Assessment and Evaluation Branch in JUNE 2003.)

Absent	
01	arrived too late to write the test
02	did not write due to weather
03	family/personal reasons
04	medical/illness/accident
05	out-of-town activity (athletic/academic)
06	religious objections
07	student refused to write
08	unexcused
09	working
19	other (please specify)

Withdrawn	
22	dropped course
23	incarcerated/court
24	medical/illness/accident
25	family/personal reasons
26	poor attendance/progress
27	quit school
29	other (please specify)

Incomplete	
40	continuing course/program next semester
41	no work completed
49	other (please specify)

Errors in Registration	
20	changed program
21	deceased
50	already has credit
51	auditing the course
52	exchange student
53	registered twice
54	quarter system projected registration
55	registered in wrong grade
59	other (please specify)

Exemptions	
60	emotional/psychological condition or circumstances
61	"M" credit designation
62	"E" credit designation
63	"phase d'accueil—bloc intensif" designation
69	other (please specify)

Drop Ins	
70	forgotten on original test registration
71	late registration to course
72	transferred in from another school/province/country
73	rewrite (not currently enrolled)
79	other (please specify)

Migrancy	
90	transferred to another school within the province
91	transferred to another school outside of the province
99	other (please specify)

W:\eduase\EXAM\MATHS4\Consumer\2002-2003\Sem2\Ship\Ship 1-Portfolio\Admin Man Sup Teach02-03.doc

Senior 4 Consumer Mathematics (40S) Standards Test

Portfolio

Guide for Teachers

2003

Manitoba
Education
and Youth

This package contains:

- Introductory Information
- *Student Organizer Sheet*
- Student explanation sheets with Portfolio questions
- Recommended Portfolio Scoring Strategy
- *Portfolio Scoring Rubric*
- Copy of the *Portfolio Recording Sheet*

Introductory Information

The Portfolio component of the Senior 4 Consumer Mathematics (40S) Standards Test has a classroom-based administration and may be scored using either a contents approach or an interview approach at the discretion of the classroom teacher.

The questions for the Portfolio component are designed to function as both writing prompts (contents approach) and interview prompts (interview approach).

Teachers are encouraged to have students complete preparatory work on the explanation sheets towards the end of the course and to begin the Portfolio component process prior to the two-week assessment period to allow sufficient time for interviewing and/or marking.

Recommendations for Preparing Students for the Portfolio component

1. Inform students whether they will be submitting their portfolios for marking (contents approach) or whether they will be bringing their portfolios to a 20-minute interview (interview approach).

2. Share the scoring rubric with students. The more information they have on the method of evaluation, the more prepared they will be to meet the expectations.

3. Remind students to use the *Student Organizer Sheet* to assist them in selecting work samples that illustrate different skills as well as different units of study. For example, selecting three tests from three different units will not score as well as three different types of consumer mathematics activities from three different units. Selecting a variety of work samples will also help eliminate repetitious explanations.

4. Inform students that their explanation sheets are the method by which they will be evaluated if the contents approach is being used. If the interview approach is being used, the explanation sheets provide pointers for discussion during the interview.

5. Explain to students that each explanation sheet has two major questions followed by sub-questions. These questions are designed as focal points for their written response (contents approach). In the interview approach, these are the verbal prompts that the interviewer uses to elicit a response from them about each portfolio selection.

6. Make students aware that for reasons of fair assessment, interviewers will not stray from the prompts provided on the explanation sheets. Similarly, when using the contents approach, teachers will not proofread or make suggestions about written responses prior to submission.

Recommendations for Administering the Portfolio component

1. Introduce the practice of maintaining a portfolio early in the year. Inform students that part of their assessment will be based on their portfolio.

2. Create a system for organizing and storing portfolios. Some teachers have had students use storage containers such as pizza boxes, file folders or accordion files.

3. Form your decision to interview students or mark their submitted portfolios early in the semester/year. Inform the students of your plan.

4. Plan sufficient time and reserve a quiet place for interviewing/marking the Portfolio component. All marks must be recorded by June 9, 2003.

5. **Photocopy sufficient quantities** of the *Student Organizer Sheet* and student explanation sheets. Distribute the sheets to students to allow sufficient time for them to make good choices in their sample selections and to construct thorough responses.

6. If interviewing, relax the student by describing the process. Let the student know in advance that you will be jotting down notes as the interview proceeds to help you recall the details.

7. Keep the recording sheets secure location with demographic forms and the *Attendance Form*. The *Attendance Form* is required during the remaining two parts of the standards test.

Recommendations for Scoring the Portfolio component

This package contains sufficient numbers of scan sheets (based on the number of students registered for your course) for recording portfolio scores. Keep a record of each student's results. A recording sheet template is provided to assist you.

Specific directions for scoring the portfolios are listed on page 11.

Student Organizer Sheet

Senior 4 Consumer Mathematics (40S) Standards Test: Portfolio

Please include the following five (5) work samples and their accompanying explanation sheet:

☑ **Career/Life Project**
- *Portfolio Sample: Career/Life Project Explanation Sheet*

☑ **Personal Income Tax Form**
- *Portfolio Sample: Personal Income Tax Form Explanation Sheet*

☑☑☑ **Three (3) work samples of your choice**
- Samples from three (3) different units demonstrating a variety of skills and strategies (see list of types of samples for suggestions)
- *Portfolio Sample: Student Choice Explanation Sheet* (one for each sample)

Unit of Study:

☐ Problem Analysis
☐ Design and Measurement
☐ Investigative Project
☐ Analysis of Games and Numbers
☐ Government Finances
☐ Investments
☐ Personal Finance
☐ Statistics
☐ Variation and Formulas

Types of Work Samples (suggestions):

☐ Budget
☐ Daily Assignment
☐ Journal Entry
☐ Scaled Drawing
☐ Unit Summary
☐ Case Study
☐ Discussion Notes
☐ Project
☐ Technology/Spreadsheet/CAD
☐ Other (specify) ______________
☐ Chart/Graph/Diagram
☐ Game/Puzzle
☐ Research
☐ Test/Quiz

Booklet No.:

Portfolio Sample: Career/Life Project Explanation Sheet

PART A: THE CONSUMER MATHEMATICS CONNECTION

Describe your Career/Life Project.

- How did you choose the career?
- How did you research the project?
- What math-related skills did you use?
- How does this project connect to Consumer Mathematics?

PART B: THE REAL WORLD CONNECTION

Explain how this project might help you plan for your future.

- What did you learn about your personal skills and interests by doing this project?
- How does this project connect to everyday life?

Booklet No.:

Portfolio Sample:
Personal Income Tax Form Explanation Sheet

PART A: THE CONSUMER MATHEMATICS CONNECTION

Describe your sample Personal Income Tax Form.

- What math-related skills did you use to complete the Personal Income Tax Form?
- What information did you need to complete the Personal Income Tax Form?
- How does the Personal Income Tax Form relate to other units in Consumer Mathematics?

PART B: THE REAL WORLD CONNECTION

Explain the use of Personal Income Tax Forms.

- How does Personal Income Tax Form preparation connect to everyday life?
- Why are Personal Income Tax Forms required for both Manitoba and Canada?

Booklet No.:

Portfolio Sample: Student Choice Explanation Sheet

Summary

Unit:

- ☐ Problem Analysis
- ☐ Design and Measurement
- ☐ Investigative Project
- ☐ Analysis of Games and Numbers
- ☐ Government Finances
- ☐ Investments
- ☐ Personal Finance
- ☐ Statistics
- ☐ Variation and Formulas

Types of Sample:

- ☐ Budget
- ☐ Daily Assignment
- ☐ Journal Entry
- ☐ Scaled Drawing
- ☐ Unit Summary
- ☐ Case Study
- ☐ Discussion Notes
- ☐ Project
- ☐ Technology/Spreadsheet/CAD
- ☐ Other (specify) ______________
- ☐ Chart/Graph/Diagram
- ☐ Game/Puzzle
- ☐ Research
- ☐ Test/Quiz

PART A: THE CONSUMER MATHEMATICS CONNECTION

Describe your sample.

- Why is this sample important to include in your portfolio?
- What processes were involved in completing this sample?
- What math-related skills did you use?
- How does this sample connect to Consumer Mathematics?

PART B: THE REAL WORLD CONNECTION

Explain how this sample connects to everyday life.

- What did you learn about your personal skills and interests?
- What types of activities or workplaces use this kind of information?

Recommended Portfolio Scoring Strategy

Students are scored on 2 dimensions: format and reflection—using a pre-established scoring rubric (see next page) whether an interview approach is being used or a contents approach is being used.

Dimension 1—Format

THE MARKER HOLISTICALLY SCANS THE PORTFOLIO

This scoring dimension focuses on overall impression, neatness and completeness. The marker is answering the question, "Generally, are the portfolio samples varied, legible, carefully arranged?" The following marking strategy is recommended:

- Scan the student's portfolio for a general sense of how the student has selected samples and arranged them.
- Read the descriptors under Level 2 (which are identical to the outcomes) and decide if they are appropriate. If not, read the descriptors of the level above or below.
- If only some of the descriptors in a particular level of performance fit, determine the degree to which the student is approaching the next or previous level and whether the "approaching level" is a more appropriate description of the portfolio.

Dimension 2—Reflection

THE MARKER HOLISTICALLY CONSIDERS EACH STUDENT SAMPLE

Dimension 2 focuses on each sample in the student's portfolio collection. The marker is answering the question, "For each sample, has the student linked the content of the explanation sheet to the work sample in terms of real world connections and consumer mathematics skills and strategies?"

The marker is searching for evidence of mathematical analysis and synthesis as it relates to the real world and other units of study. The following marking strategy is recommended:

- Read each student's explanation sheet for evidence of specific reflections related to each portfolio sample. [If using the interview approach, ask the student to respond orally to each prompt.]
- Form a judgement on the logic of reasoning in terms of each sample provided, the mathematical connections and the connections to the real world. [If using the interview approach, form a judgement based on the logic provided orally by the student.]

The "no mark" category is restricted to those portfolios that are not legible, not submitted or do not fit the descriptors on the rubric.

<table>
<tr><th colspan="2">CONSUMER 40S PORTFOLIO SCORING RUBRIC</th><th colspan="2">Level 1 Portfolio</th><th colspan="3">Level 2 Portfolio</th><th colspan="2">Level 3 Portfolio</th></tr>
<tr><td rowspan="3">Format</td><td>Context</td><td colspan="2">Incomplete Portfolio:
<i>Unclear, inconsistent or incomplete portfolio</i></td><td colspan="3">Complete Portfolio:
<i>Relatively clear and complete portfolio</i></td><td colspan="2">Clear, Complete Portfolio:
<i>Clear, coherent, and complete portfolio</i></td></tr>
<tr><td>• Overall Impression</td><td colspan="2">• Disorganized; some parts are legible</td><td colspan="3">• Organized; all parts are legible</td><td colspan="2">• Organized; all parts are easy to read</td></tr>
<tr><td>• Selection (variety)</td><td colspan="2">• Limited selection of samples; some samples are missing or incomplete</td><td colspan="3">• Complete selection of samples; all samples are complete and relevant</td><td colspan="2">• Complete and varied selection of samples; all samples are complete and relevant</td></tr>
<tr><td rowspan="3">Reflection</td><td>Collection: Analysis/Synthesis</td><td colspan="2">Limited Reflections:
<i>Reflections on explanation sheets are sketchy or not present</i></td><td colspan="3">Routine Reflections:
<i>Reflections on explanation sheets are limited and/or similar</i></td><td colspan="2">Thorough/Insightful Reflections:
<i>Insightful reflections on explanation sheets</i></td></tr>
<tr><td>• Mathematical Connection (question 1)</td><td colspan="2">• Errors in reasoning; ideas are sometimes unrelated to mathematical concepts
• Explanation relates loosely to portfolio work sample</td><td colspan="3">• Logical reasoning; ideas are related to mathematical concepts
• Explanation relates to portfolio work sample</td><td colspan="2">• Insightful reasoning; ideas combine mathematical concepts
• Explanation is linked directly to portfolio work sample</td></tr>
<tr><td>• Real World Connection (question 2)</td><td colspan="2">• No attempt to connect across concepts or everyday life</td><td colspan="3">• Connects mathematical concepts to everyday life where applicable</td><td colspan="2">• Makes multiple connections between mathematical concepts and everyday life where applicable</td></tr>
<tr><td colspan="2">Performance Level:</td><td>Level 1</td><td colspan="2">Approaching Level 2</td><td>Level 2</td><td colspan="2">Approaching Level 3</td><td>Level 3</td></tr>
</table>

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PLEASE DO NOT WRITE IN THIS AREA
[SERIAL]

Senior 4 Consumer Mathematics (40S) Standards Test—2003

Portfolio Scoring Sheet

INSTRUCTIONS

- Use an HB pencil only.
- Do not use ballpoint or felt tip pens.
- Do not mark other areas on this form.
- Shade the appropriate circle.
- Erase cleanly any marks you wish to change.

CORRECT: ● INCORRECT: ⊘ ☒ ◒ ◔

○ INTERVIEW APPROACH

○ CONTENTS APPROACH

		No mark	Level 1	Approaching Level 2	Level 2	Approaching Level 3	Level 3	
Format	**Context** • Overall Impression • Selection	⓪	①	②	③	④	⑤	101
(25)	SUBTOTAL (5 x Level)							
Reflection	**Collection: Analysis/Synthesis**							
	Sample 1: Career/Life Project							
	• Mathematical Connection (Part A)	⓪	①	②	③	④	⑤	102
	• Real World Connection (Part B)	⓪	①	②	③	④	⑤	103
	Sample 2: Personal Income Tax Form							
	• Mathematical Connection (Part A)	⓪	①	②	③	④	⑤	104
	• Real World Connection (Part B)	⓪	①	②	③	④	⑤	105
	Sample 3: (Choice 1)							
	• Mathematical Connection (Part A)	⓪	①	②	③	④	⑤	106
	• Real World Connection (Part B)	⓪	①	②	③	④	⑤	107
	Sample 4: (Choice 2)							
	• Mathematical Connection (Part A)	⓪	①	②	③	④	⑤	108
	• Real World Connection (Part B)	⓪	①	②	③	④	⑤	109
	Sample 5: (Choice 3)							
	• Mathematical Connection (Part A)	⓪	①	②	③	④	⑤	110
	• Real World Connection (Part B)	⓪	①	②	③	④	⑤	111
(75)	SUBTOTAL (1.5 x Level)							

MET No.: ______________________

TOTAL SCORE

/100

FOR FURTHER INFORMATION
Assessment and Evaluation Branch

Consumer Mathematics (40S)

Assessment Consultant:
Lorna Martin 945-8075
or toll-free at 1 800 282-8069, extension 8075

Senior 4 Consumer Mathematics (40S) Standards Test

Project Resource Package

Comparative Car Shopping

Semester 2
2003

Manitoba
Education
and Youth

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Manitoba Education and Youth,
Assessment and Evaluation Branch,
Winnipeg, Manitoba R3E 3J5

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Welcome to the 'Comparison Car Shopping' Project

This resource package has been created to help you complete a project based on comparison shopping for the purchase of a vehicle. In this project, a variety of cars is presented for your consideration. You may research other publications for a vehicle that you may prefer however, copies of the datasheets for the vehicles, car payment terms, and their source must be included with your report. To complete this project you must select the most appropriate vehicle for your needs based on your financial situation and your anticipated uses of the vehicle (e.g., business, pleasure, long distance travel).

General Instructions:

Your class may have a 60-minute brainstorming session during the first work period, in which you may work with others, discuss, and research the project freely. Following the brainstorming session, your work must be individual. Your teacher is not permitted to assist you in developing or revising your project. Two additional 60-minute class work periods will be devoted to creating individual projects based on the assigned topic. You must submit an individual project that reflects your own work.

Develop a structured project in the form of a report on the comparison of two selected vehicles. Your project must be separate from this booklet, be double-spaced and written or typed/printed in blue or black ink.

This resource package is designed to provide background information, charts, diagrams, and tables to assist you in completing your project. You may use additional or alternative resources if you wish. Remember to submit your project separate from this booklet.

The ‘Comparative Car Shopping’ Project

This project has three components. You must compare the cost and condition of two vehicles, select one appropriate vehicle for your needs and finance that vehicle within a stated budget. You have an annual net income of $22 800 and have savings of $2 500 to use for the down payment and/or insurance. The financing rate is 6% for the vehicles listed in this resource package.

The basic structure of your project should include the following information:
- Statement of your financial and family situation using a monthly budget
- Anticipated use of the vehicle
- Comparison of insurance rates for the two vehicles
- Choice of car payment terms for your selected vehicle only
- Calculation of car payments for your selected vehicle only
- Justification for your purchase decisions

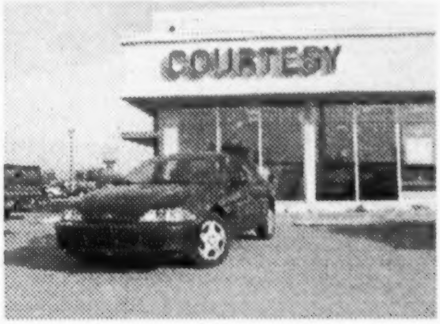
Remember:
- Your car payments should not exceed 20% of your monthly net income
- In addition to regular living costs, you are committed to the following budget items:
    - Mortgage payment of $550/month
    - Utilities of $200/month
    - Property insurance of $50/month

Vehicles

For the purposes of this project, prices include all applicable taxes.

Chevrolet Cavalier 2001

Price: **$10 200.00**
Odometer: **12 000 km**



Stock: 4835
VIN: 3G1JF52T91S155849
Engine: 2.2 L
Condition: Used
Warranty: Available
Classification: Sedan
Transmission: Automatic
Cylinders: 4 cyl.
Fuel system: Gas
Drive: FWD
Doors: 4 drs.
Passengers: 5 psgrs.

Interior colour: Dark Grey
Exterior colour: Red
Options: Cruise Control, Driver Air Bag, CD Player, Anti-Lock Brakes, AM/FM Stereo, Air Conditioning, Spoiler, Power Mirrors, Power Locks, Tilt Steering, Power Steering, Power Windows, Power Brakes, Keyless Entry

---

Ford Focus 2001

Price: **$16 980.00**
Odometer: **24 000 km**

Stock: X5270-0
VIN: 1FAFP34341W178249
Trim: SE Sport
Engine: 2.0 L
Condition: Used
Financing: Available
Classification: Sedan
Transmission: Automatic
Cylinders: 4 cyl.
Fuel system: Gas
Drive: FWD

Doors: 4 drs.
Interior colour: Light Grey
Exterior colour: Silver
Options: Dual Air Bags, Cruise, CD Player, Bucket Seats, AM/FM Stereo, Air Conditioning, Alloy Wheels, Spoiler, Power Mirrors, Tinted Glass, Power Locks, Tilt Steering, Power Windows, Power Brakes

Ford Mustang Coupe 2001

Price: **$19 995.00**
Odometer: **16 600 km**

Stock: 02R09P
Engine: 3.8 L
Condition: Used
Financing: Available
Classification: Coupe
Transmission: Automatic
Cylinders: 6 cyl.
Fuel system: Gas
Drive: RWD
Doors: 2 drs.
Passengers: 5 psgrs.

Interior colour: Tan
Exterior colour : Light Green
Options: Air Conditioning, Alloy Wheels, Power Seat, Power Mirrors, Power Locks, Spoiler, Keyless Entry, Traction Control, Dual Air Bag, Tilt Steering, Power Windows, Power Steering, Power Brakes, Cruise Control, CD Player, Cassette, Bucket Seats, Anti-Theft, AM/FM Stereo

---

HONDA CIVIC 2001

Price: **$19 500.00**
Odometer: **16 000 km**

2001 HONDA CIVIC LX Only16000 km, one owner car, well maintained, dual air bag, CD player, am/fm stereo, air conditioning, tilt steering, power locks, tinted rear windows. Only $19 500.00

Nissan SENTRA XE 2001

Price: **$14 900.00**
Odometer: **23 000 km**

Stock: p2395A
Engine: 1.6 L
Condition: Used
Warranty: Available
Financing: Available
Classification: Sedan
Transmission: Automatic
Cylinders: 4 cyl.
Fuel system: Gas

Drive: FWD
Doors: 4 drs.
Passengers: 5 psgrs.
Interior colour: Light Grey
Exterior colour: Dark Green
Options: Cassette, Tilt Steering, Power Steering, AM/FM Stereo, Power Brakes, Air Conditioning, Dual Air Bag

---

Pontiac Sunfire 2001

Price: **$13 995.00**
Odometer: **23 000 km**

Stock: 4961-02
VIN: 1G2JB524X17360420
Trim: SL
Engine: 2.2 L
Condition: Used
Warranty: Available
Financing: Available
Classification: Sedan
Transmission: Automatic
Cylinders: 4 cyl.
Fuel system: Gas

Drive: FWD
Doors: 4 drs.
Interior colour: Light Grey
Exterior colour: Silver
Options: Dual Air Bag, CD Player, Bucket Seats, Anti-Lock Brakes, AM/FM Stereo, Air Conditioning, Spoiler, Tinted Glass, Power Locks, Keyless Entry

Pontiac GRAND PRIX SE 2001

Price: **$17 911.00**
Odometer: **36 154 km**

Stock: 7991A
Engine: 3.1 L
Condition: Used
Financing: Available
Classification: Sedan
Transmission: Automatic
Cylinders: 6 cyl.
Fuel system: Gas
Drive: FWD

Doors: 4 drs.
Interior colour: Light Grey
Exterior colour: Maroon
Options: Cruise Control, Driver Air Bag, CD Player, Bucket Seats, Anti-Lock Brakes, AM/FM Stereo, Air Conditioning, Spoiler, Power Seat, Power Mirrors, Power Locks, Tilt Steering, Power Windows, Fog Lights

Pontiac Grand AM SE1 2001

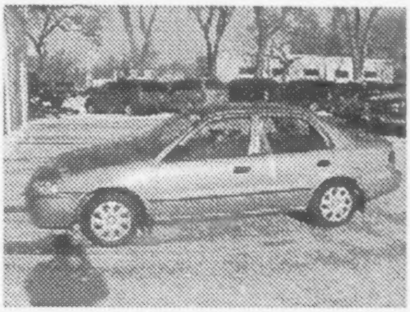
Price: **$19 995.00**
Odometer: **16 443 km**

Stock: 32067
VIN: 1G2NF52E41M648143
Engine: 3.4 L V-6
Condition: Used
Classification: Sedan
Transmission: Automatic
Cylinders: 6 cyl.
Fuel system: Gas
Drive: FWD
Doors: 4 drs.

Passengers: 5 psgrs.
Exterior colour: Dark Blue
Options: Air Conditioning, Alloy Wheels, Power Mirrors, Power Locks, Spoiler, Keyless Entry, Traction Control, Dual Air Bag, Tinted Glass, Tilt Steering, Power Windows, Power Steering, Power Brakes, Cruise Control, CD Player, Cassette, Bucket Seats, Anti-Theft, Anti-Lock Brakes, AM/FM Stereo

Toyota COROLLA CE 2001

Price: **$15 900.00**
Odometer: **28 000 km**



Stock: 6736
Engine: 1.8 L 4 cyl
Condition: Used
Warranty: Available
Financing: Available
Classification: Sedan
Transmission: Automatic
Cylinders: 4 cyl.
Fuel system: Gas

Drive: FWD
Doors: 4 drs.
Passengers: 5 psgrs.
Interior colour: Tan
Exterior colour: Gold
Options: Dual Air Bag, CD Player, Bucket Seats, Air Conditioning, Tinted Glass, Tilt Steering, Power Locks, Power Steering, Power Brakes

Vehicle Insurance

For the purposes of this project, no fees are applied when paying insurance monthly.

Manitoba Public Insurance

Insurance Rate Calculator

Estimate for:	**2002 Rates**
2001 CHEVROLET CAVALIER	Effective Mar 01, 2002
Basic Insurance Premium	$1 151
Deductible	$0
Third Party Liability	$0
Interest and Administration Fee	$0
Total Insurance Cost	$1 151
Registration Fee	$58
Plate Use Fee	$7
Total Registration Cost	$65
TOTAL ESTIMATE	**$1 216**

Estimate for:	**2002 Rates**
2001 FORD FOCUS SE	Effective Mar 01, 2002
Basic Insurance Premium	$1 081
Deductible	$0
Third Party Liability	$0
Interest and Administration Fee	$0
Total Insurance Cost	$1 081
Registration Fee	$58
Plate Use Fee	$7
Total Registration Cost	$65
TOTAL ESTIMATE	**$1 146**

Estimate for:	**2002 Rates**
2001 FORD MUSTANG	Effective Mar 01, 2002
Basic Insurance Premium	$1 353
Deductible	$0
Third Party Liability	$0
Interest and Administration Fee	$0
Total Insurance Cost	$1 353
Registration Fee	$58
Plate Use Fee	$7
Total Registration Cost	$65
TOTAL ESTIMATE	**$1 418**

Estimate for: **2001 HONDA CIVIC LX**	**2002 Rates** Effective Mar 01, 2002
Basic Insurance Premium	$1 010
Deductible	$0
Third Party Liability	$0
Interest and Administration Fee	$0
Total Insurance Cost	$1 010
Registration Fee	$58
Plate Use Fee	$7
Total Registration Cost	$65
TOTAL ESTIMATE	**$1 075**

Estimate for: **2001 NISSAN SENTRA XE**	**2002 Rates** Effective Mar 01, 2002
Basic Insurance Premium	$1 116
Deductible	$0
Third Party Liability	$0
Interest and Administration Fee	$0
Total Insurance Cost	$1 116
Registration Fee	$58
Plate Use Fee	$7
Total Registration Cost	$65
TOTAL ESTIMATE	**$1 181**

Estimate for: **2001 PONTIAC SUNFIRE**	**2002 Rates** Effective Mar 01, 2002
Basic Insurance Premium	$1 116
Deductible	$0
Third Party Liability	$0
Interest and Administration Fee	$0
Total Insurance Cost	$1 116
Registration Fee	$58
Plate Use Fee	$7
Total Registration Cost	$65
TOTAL ESTIMATE	**$1 181**

Estimate for:	**2002 Rates**
2001 PONTIAC GRAND PRIX SE	Effective Mar 01, 2002
Basic Insurance Premium	$1 045
Deductible	$0
Third Party Liability	$0
Interest and Administration Fee	$0
Total Insurance Cost	$1 045
Registration Fee	$58
Plate Use Fee	$7
Total Registration Cost	$65
TOTAL ESTIMATE	**$1 110**

Estimate for:	**2002 Rates**
2001 PONTIAC GRAND AM SE1	Effective Mar 01, 2002
Basic Insurance Premium	$976
Deductible	$0
Third Party Liability	$0
Interest and Administration Fee	$0
Total Insurance Cost	$976
Registration Fee	$58
Plate Use Fee	$7
Total Registration Cost	$65
TOTAL ESTIMATE	**$1 041**

Estimate for:	**2002 Rates**
2001 TOYOTA COROLLA CE	Effective Mar 01, 2002
Basic Insurance Premium	$1 081
Deductible	$0
Third Party Liability	$0
Interest and Administration Fee	$0
Total Insurance Cost	$1 081
Registration Fee	$58
Plate Use Fee	$7
Total Registration Cost	$65
TOTAL ESTIMATE	**$1 146**

Vehicle Comparison

	2001 Chevrolet Cavalier 4 doors	**2001 Ford Focus 4 door Sedan**	**2001 Ford Mustang Coupe**
Pros	Affordably priced, roomy enough for a family of four, Z24 is a stylish and speedy low-buck sport coupe	Thoughtful and large interior, smooth ride, sharp steering, good selection of body configurations and features	Strong V8 power, competent chassis and brakes, good crash test scores, ragtop option
Con	You get what you pay for in terms of feature content, haphazard build quality, dreadfully uncomfortable seats	Lots of suspension movement over dips, not enough low-end grunt, polarizing styling	Solid rear axle, excessive gingerbread detailing on GT, poor stereo ergonomics, flaccid seats
Class	Compact Cars	Compact Cars	Subcompact Cars
Bodystyle	Sedan	Sedan	Coupe
Drive Type	FWD	FWD	RWD
WARRANTY	**Chevrolet Cavalier**	**Ford Focus**	**Ford Mustang**
Basic	3 yr. / 36 000 mi.	3 yr. / 36 000 mi.	3 yr. / 36 000 mi.
Drivetrain	3 yr. / 36 000 mi.	3 yr. / 36 000 mi.	3 yr. / 36 000 mi.
Roadside	3 yr. / 36 000 mi.	3 yr. / 36 000 mi.	3 yr. / 36 000 mi.
Rust	6 yr. / 100 000 mi.	5 yr. / unlimited mi.	5 yr. / unlimited mi.
EPA MILEAGE ESTIMATES	**Chevrolet Cavalier**	**Ford Focus**	**Ford Mustang**
Manual (City/HWY.)	24 mpg / 33 mpg	28 mpg / 36 mpg	20 mpg / 29 mpg
Automatic (City/HWY.)	24 mpg / 32 mpg	N/A	N/A
FUEL DATA	**Chevrolet Cavalier**	**Ford Focus**	**Ford Mustang**
Fuel Tank Capacity	14.1 gal.	13.2 gal.	15.5 gal.
RANGE IN MILES	**Chevrolet Cavalier**	**Ford Focus**	**Ford Mustang**
Manual (City/HWY.)	338 mi. / 465 mi.	370 mi. / 475 mi.	310 mi. / 450 mi.
Automatic (City/HWY.)	338 mi. / 451 mi.	N/A	N/A
CRASH TEST RESULTS	**Chevrolet Cavalier**	**Ford Focus**	**Ford Mustang**
Driver	Average	Good	Excellent
Passenger	Good	Good	Excellent
Side Impact Front	Very Poor	Average	Average
Side Impact Rear	Poor	Good	Average
Crash Offset	Not Tested	Good	Not Tested
Bumper Bash	Not Tested	Not Tested	Not Tested

SAFETY FEATURES	**Chevrolet Cavalier**	**Ford Focus**	**Ford Mustang**
(*4WD) Anti-Lock Brakes	Standard	Optional	Not Available
De-powered Air Bags	Standard	Standard	Standard
Head Air Bags	Not Available	Not Available	Not Available
Side Air Bags	Not Available	Optional	Not Available
Integrated Child Seat	Not Available	Not Available	Not Available
Traction Control	Not Available	Not Available	Not Available
Stability Control	Not Available	Not Available	Not Available
PERFORMANCE DATA	**Chevrolet Cavalier**	**Ford Focus**	**Ford Mustang**
Acceleration (0-60 mph)	N/A	N/A	N/A
Base Engine Type	Inline	Inline	V6
Base Engine Size	2.2 litres	2 litres	3.8 litres
Base Number of Cylinders	4	4	6
Braking Distance (60-0 mph)	N/A	N/A	N/A
Horsepower	115 hp @ 5 000rpm	130 hp @ 5 300 rpm	190 hp @ 5 250 rpm
Road Holding Index	N/A	N/A	N/A
Torque	135 ft-lbs. @ 3 600 rpm	135 ft-lbs. @ 4 500 rpm	220 ft-lbs. @ 2 750 rpm
Max. Cargo Capacity	*	*	*
Max. Payload	*	*	*
Max. Towing Capacity	*	1 000 lbs.	*
INTERIOR	**Chevrolet Cavalier**	**Ford Focus**	**Ford Mustang**
Front Headroom	37.6 in.	39.3 in.	38.1 in.
Rear Headroom	36.6 in.	38.5 in.	35.5 in.
Front Shoulder Room	53.9 in.	53.7 in.	53.6 in.
Rear Shoulder Room	54.9 in.	53.7 in.	52.1 in.
Front Hip Room	50 in.	49.4 in.	52.3 in.
Rear Hip Room	49.5 in.	49.5 in.	47.4 in.
Front Leg Room	41.9 in.	43.1 in.	42.6 in.
Rear Leg Room	32.7 in.	37.6 in.	29.9 in.
Maximum Luggage Capacity	13.2 cu. ft.	12.9 cu. ft.	10.9 cu. ft.
Maximum Seating	5	5	4
EXTERIOR	**Chevrolet Cavalier**	**Ford Focus**	**Ford Mustang**
Length	180.9 in.	174.9 in.	183.2 in.
Width	68.7 in.	66.9 in.	73.1 in.
Height	53 in.	56.3 in.	53.1 in.
Weight	2 617 lbs.	2 604 lbs.	3 066 lbs.
Wheel Base	104.1 in.	103 in.	101.3 in.
Turning Circle	35.6 ft.	34.3 ft.	37.1 ft.
Ground Clearance	*	*	*

	2001 Honda Civic LX	2001 Nissan Sentra XE	2001 Pontiac Sunfire
Pros	Fuel-efficient, environmentally friendly engines, roomy interior reputation for durability, impressive crash-test scores	SULEV emissions status for CA model, 165-horsepower SE-R sport version, pleasing cabin design, fun to drive	Rev-happy twin-cam engine, dealers are rebating these cars like there's no tomorrow
Con	Antilock brakes not available on DX or LX	Generic styling, GXE and SE-R model command premium price	Lack of refinement, overdone styling, old-tech engineering, sloppy handling, poor crash-test scores, uncomfortable cabin
Class	Subcompact Cars	Compact Cars	Compact Cars
Bodystyle	Sedan	Sedan	Sedan
Drive Type	FWD	FWD	FWD
WARRANTY	**Honda Civic**	**Nissan Sentra**	**Pontiac Sunfire**
Basic	3 yr. / 36 000 mi.	3 yr. / 36 000 mi.	3 yr. / 36 000 mi.
Drivetrain	3 yr. / 36 000 mi.	5yr. / 60 000 mi.	3 yr. / 36 000 mi.
Roadside	Unknown	3 yr. / 36 000 mi.	3 yr. / 36 000 mi.
Rust	5 yr. / unlimited mi.	5 yr. / unlimited mi.	6 yr. / 100 000 mi.
EPA MILEAGE ESTIMATES	**Honda Civic**	**Nissan Sentra**	**Pontiac Sunfire**
Manual (City/HWY.)	32 mpg / 37 mpg	N/A	25 mpg / 33 mpg
Automatic (City/HWY.)	N/A	27 mpg / 33 mpg	24 mpg / 32 mpg
FUEL DATA	**Honda Civic**	**Nissan Sentra**	**Pontiac Sunfire**
Fuel Tank Capacity	13.2 gal.	13.2 gal.	14.1 gal.
RANGE IN MILES	**Honda Civic**	**Nissan Sentra**	**Pontiac Sunfire**
Manual (City/HWY.)	422 mi. /488 mi.	N/A	353 mi. / 465 mi.
Automatic (City/HWY.)	N/A	356 mi. / 436 mi.	338 mi. / 451 mi.
CRASH TEST RESULTS	**Honda Civic**	**Nissan Sentra**	**Pontiac Sunfire**
Driver	Excellent	Good	Good
Passenger	Excellent	Good	Good
Side Impact Front	Good	Not Tested	Very Poor
Side Impact Rear	Good	Not Tested	Average
Crash Offset	Good	Acceptable	Poor
Bumper Bash	Acceptable	Acceptable	Acceptable

SAFETY FEATURES	Honda Civic	Nissan Sentra	Pontiac Sunfire
(*4WD) Anti-Lock Brakes	Not Available	Not Available	Standard
De-powered Air Bags	Standard	Standard	Standard
Head Air Bags	Not Available	Not Available	Not Available
Side Air Bags	Not Available	Not Available	Not Available
Integrated Child Seat	Not Available	Not Available	Not Available
Traction Control	Not Available	Not Available	Optional
Stability Control	Not Available	Not Available	Not Available
PERFORMANCE DATA	**Honda Civic**	**Nissan Sentra**	**Pontiac Sunfire**
Acceleration (0-60 mph)	N/A	N/A	N/A
Base Engine Type	Inline	Inline	Inline
Base Engine Size	1.7 litres	1.8 litres	2.2 litres
Base Number of Cylinders	4	4	4
Braking Distance (60-0 mph)	N/A	N/A	N/A
Horsepower	115 hp @ 6 100 rpm	126 hp @ 6 000rpm	115 hp @ 5 000 rpm
Road Holding Index	N/A	N/A	N/A
Torque	110 ft-lbs. @ 4 500 rpm	129 ft-lbs. @ 2 400 rpm	135 ft-lbs. @ 3 600 rpm
Max. Cargo Capacity	*	*	*
Max. Payload	*	*	*
Max. Towing Capacity	*	*	*
INTERIOR	**Honda Civic**	**Nissan Sentra**	**Pontiac Sunfire**
Front Headroom	39.8 in.	39.9 in.	38.9 in.
Rear Headroom	37.2 in.	37 in.	37.2 in.
Front Shoulder Room	52.6 in.	52.5 in.	54.6 in.
Rear Shoulder Room	52 in.	52.6 in.	53.9 in.
Front Hip Room	51.2 in.	52.1 in.	50.9 in.
Rear Hip Room	49.8 in.	52.3 in.	51.1 in.
Front Leg Room	42.2 in.	41.6 in.	42.1 in.
Rear Leg Room	36 in.	33.7 in.	34.3 in.
Maximum Luggage Capacity	12.9 cu. ft.	11.6 cu. ft.	13.1 cu. ft.
Maximum Seating	5	5	5
EXTERIOR	**Honda Civic**	**Nissan Sentra**	**Pontiac Sunfire**
Length	174.6 in.	177.5 in.	181.8 in.
Width	67.5 in.	67.3 in.	67.9 in.
Height	56.7 in.	55.5 in.	54.7 in.
Weight	2 465 lbs.	2 592 lbs.	2 644 lbs.
Wheel Base	103.1 in.	99.8 in.	104.1 in.
Turning Circle	34.1 ft.	N/A	N/A
Ground Clearance	*	*	*

	2001 Grand Prix SE	2001 Pontiac Grand AM SE1	2001 Toyota Corolla CE
Pros	Strong powertrains, sporty styling, loads of features, fun to drive	Sporty styling, lots of standard features, available five-speed manual transmission, crisp handling	Smooth ride, spunky motor, tight build quality, refined bits and pieces, optional side airbags
Con	Overstyled interior, cheap-looking dashboard plastic and switchgear	Price creep has followed sales growth, true sport sedans need a five-speed with a V6, cheap interior pieces	Cramped and uncomfortable interior, mushy suspension, non-descript styling
Class	Midsize Cars	Compact Cars	Compact Car
Bodystyle	Sedan	Sedan	Sedan
Drive Type	FWD	FWD	FWD
WARRANTY	**Pontiac Grand Prix**	**Pontiac Grand Am**	**Toyota Corolla CE**
Basic	3 yr. / 36 000 mi.	3 yr. / 36 000 mi.	3 yr. / 36 000 mi.
Drivetrain	3 yr. / 36 000 mi.	3 yr. / 36 000 mi.	5 yr. / 60 000 mi.
Roadside	3 yr. / 36 000 mi.	3 yr. / 36 000 mi.	Unknown
Rust	6 yr. / 100 000 mi.	6 yr. / 100 000 mi.	5 yr. / unlimited mi.
EPA MILEAGE ESTIMATES	**Pontiac Grand Prix**	**Pontiac Grand Am**	**Toyota Corolla CE**
Manual (City/HWY.)	N/A	25 mpg / 33 mpg	N/A
Automatic (City/HWY.)	20 mpg / 29 mpg	24 mpg / 32 mpg	29 mpg / 33 mpg
FUEL DATA	**Pontiac Grand Prix**	**Pontiac Grand Am**	**Toyota Corolla CE**
Fuel Tank Capacity	17.5 gal.	14.3 gal.	13.2 gal.
RANGE IN MILES	**Pontiac Grand Prix**	**Pontiac Grand Am**	**Toyota Corolla CE**
Manual (City/HWY.)	N/A	358 mi. / 472 mi.	N/A
Automatic (City/HWY.)	350 mi. / 508 mi.	343 mi. / 458 mi.	383 mi. / 436 mi.
CRASH TEST RESULTS	**Pontiac Grand Prix**	**Pontiac Grand Am**	**Toyota Corolla CE**
Driver	Good	Good	Good
Passenger	Good	Good	Good
Side Impact Front	Poor	Average	Average
Side Impact Rear	Average	Average	Average
Crash Offset	Acceptable	Poor	Acceptable
Bumper Bash	Acceptable	Marginal	Good

SAFETY FEATURES	**Pontiac Grand Prix**	**Pontiac Grand Am**	**Toyota Corolla CE**
(*4WD) Anti-Lock Brakes	Standard	Standard	Not Available
De-powered Air Bags	Standard	Standard	Standard
Head Air Bags	Not Available	Not Available	Not Available
Side Air Bags	Not Available	Not Available	Optional
Integrated Child Seat	Not Available	Not Available	Not Available
Traction Control	Standard	Standard	Not Available
Stability Control	Not Available	Not Available	Not Available
PERFORMANCE DATA	**Pontiac Grand Prix**	**Pontiac Grand Am**	**Toyota Corolla CE**
Acceleration (0-60 mph)	N/A	N/A	N/A
Base Engine Type	V6	Inline	Inline
Base Engine Size	3.1 litres	2.2 litres	1.8 litres
Base Number of Cylinders	6	4	4
Braking Distance (60-0 mph)	N/A	N/A	N/A
Horsepower	175 hp @ 5 200 rpm	138 hp @ 5 600 rpm	125 hp @ 5 800 rpm
Road Holding Index	N/A	N/A	N/A
Torque	195 ft-lbs. @ 4 000 rpm	145 ft-lbs. @ 4 000 rpm	125 ft-lbs. @ 4 000 rpm
Max. Cargo Capacity	*	*	*
Max. Payload	*	*	*
Max. Towing Capacity	1 000 lbs.	*	*
INTERIOR	**Pontiac Grand Prix**	**Pontiac Grand Am**	**Toyota Corolla CE**
Front Headroom	38.3 in.	38.3 in.	39.3 in.
Rear Headroom	36.5 in.	37.6 in.	36.9 in.
Front Shoulder Room	58.5 in.	53.6 in.	52.8 in.
Rear Shoulder Room	57.2 in.	52.8 in.	52.2 in.
Front Hip Room	55.7 in.	52.6 in.	50.5 in.
Rear Hip Room	54.3 in.	52.4 in.	51.2 in.
Front Leg Room	42.4 in.	42.1 in.	42.5 in.
Rear Leg Room	35.9 in.	35.5 in.	33.2 in.
Maximum Luggage Capacity	16 cu. ft.	14.6 cu. ft.	12.1 cu. ft.
Maximum Seating	5	5	5
EXTERIOR	**Pontiac Grand Prix**	**Pontiac Grand Am**	**Toyota Corolla CE**
Length	196.5 in.	186.3 in.	174 in.
Width	72.7 in.	70.4 in.	66.7 in.
Height	54.7 in.	55.1 in.	53.7 in.
Weight	3 384 lbs.	3 116 lbs.	2 455 lbs.
Wheel Base	110.5 in.	107 in.	97 in.
Turning Circle	N/A	N/A	32.2 in.
Ground Clearance	*	*	4.7 in.

Used Vehicles
Best and Worst

The most reliable—and the most troublesome.

Although cars tend to be much more reliable than they used to be, buying any used vehicle involves some degree of risk. You can limit that risk by buying a car with a proven track record of reliability.

The exclusive reliability data in *Consumer Reports* can help guide you to models to look for and models you'd do well to avoid.

CR Good Bets, below, are the best of the best. These have performed well in our road tests and have been consistently better than average in overall reliability.

The list of Reliable used cars can help you find specific vehicles that have proved to be above average in reliability. At the other end of the spectrum are the Reliability Risks vehicles that are especially dicey buys because they have exhibited several years of poor overall reliability. Used cars to avoid lists all the models that have had below-average reliability.

CR GOOD BETS

Acura Integra
Acura RL
Acura TL
BMW 3-Series
Ford Escort
Ford F-150 (2WD)
Geo/Chevrolet Prizm
Honda Accord
Honda Civic
Honda CR-V
Honda Odyssey
Infiniti G20
Infiniti I30
Isuzu Oasis
Lexus ES300
Lexus GS300/GS400
Lexus LS400
Lexus RX300
Lincoln Town Car
Mazda Millennia

Mazda MX-5 Miata
Mazda Protegé
Mercury Tracer
Nissan Altima
Nissan Maxima
Nissan Pathfinder
Nissan Sentra
Saab 9-5
Saturn S-Series
Subaru Forester
Subaru Impreza
Subaru Legacy
Toyota 4Runner
Toyota Avalon
Toyota Camry
Toyota Camry Solara
Toyota Celica
Toyota Corolla
Toyota RAV4
Toyota Sienna
Toyota Tacoma

The models in this list are especially risky buys. Distilled from the list of *Used Cars to Avoid*, they have exhibited multiple years of poor overall reliability. The list contains many twins and triplets, which are essentially similar models sold under different nameplates. Listed alphabetically.

RELIABILITY RISKS

Cadillac Catera
Chevrolet Astro
Chevrolet Blazer
Chevrolet Camaro
Chevrolet Malibu
Chevrolet S-10 (V6, 4WD)
Chevrolet Silverado 1 500 (4WD)
Chrysler LHS, New Yorker
Chrysler Town & Country ('94-97)
Dodge Dakota (4WD)
Dodge Durango
Dodge Grand Caravan ('94-97)
Dodge Intrepid
Dodge Neon
Dodge Ram 1 500 (4WD)
Ford Windstar
GMC Jimmy
GMC S-15 Sonoma (V6, 4WD)
GMC Safari
GMC Sierra 1 500 (4WD)
Jeep Grand Cherokee
Mercedes-Benz M-Class
Oldsmobile Bravada
Oldsmobile Cutlass
Plymouth Grand Voyager ('94-97)
Plymouth Neon
Pontiac Firebird
Pontiac Grand Am
Volkswagen New Beetle
Volvo S70/V70 (AWD)
Volvo S80

Good Bets and Reliability Risks are compiled from overall-reliability data covering 1994 through 2001 models with better-than or much-worse-than-average reliability. We included only the models for which we have sufficient data for at least three model years. Models that were brand new in 2000 or 2001 do not appear on these lists. Problems with the engine, engine cooling, transmission, and drive system were weighted more heavily than other problems.

Monthly Vehicle Loan Payments

(Cost per $1 000 of principal per month)

Interest Rate	1 year	2 years	3 years	4 years	5 years
4.00%	$85.23	$43.47	$29.58	$22.66	$18.52
4.25%	85.34	43.58	29.69	22.77	18.63
4.50%	85.45	43.69	29.80	22.88	18.74
4.75%	85.56	43.80	29.91	22.99	18.85
5.00%	85.67	43.91	30.02	23.10	18.96
5.25%	85.78	44.02	30.13	23.21	19.07
5.50%	85.89	44.13	30.24	23.32	19.18
5.75%	86.00	44.24	30.35	23.43	19.29
6.00%	86.11	44.35	30.46	23.54	19.40
6.25%	86.22	44.46	30.57	23.65	19.51
6.50%	86.33	44.57	30.68	23.76	19.62
6.75%	86.44	44.68	30.79	23.87	19.73
7.00%	86.55	44.79	30.90	23.98	19.84
7.25%	86.66	44.90	31.01	24.09	19.95
7.50%	86.77	45.01	31.12	24.20	20.06
7.75%	86.88	45.12	31.23	24.31	10.17
8.00%	86.99	45.23	31.34	24.42	20.28

Budget Template

PART A: Net Income (Annual)

Wages/Salary ______________

Other (specify) ______________ ______________

Total Annual Net Income ______________

Average Monthly Net Income ______________

PART B: Expenses (Monthly)

Mortgage ______________

Food ______________

Transportation ______________

Recreation/Entertainment ______________

Savings ______________

Loan Payments ______________

Utilities ______________

Insurance ______________

Gifts/Charitable Donations ______________

Personal ______________

Clothing ______________

Other (specify) ______________ ______________

Total Expenses ______________

PART C: Balance

Monthly Net Income — Total Expenses = ______________

Amount Extra ______________

SAMPLE

Acknowledgements

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Vehicle Comparison (pages 15 to 22). URL: http://edmunds.com (April 5, 2002), per the Pan Canadian Copyright Agreement

Used Vehicles Best and Worst (pages 25 and 26). URL: http://consumerreports.org/main (February 5, 2002), per the Pan Canadian Copyright Agreement

Senior 4 Consumer Mathematics (40S)
Standards Test

Sample Response to Project

COMPARATIVE
CAR SHOPPING

Semester 2
2003

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Manitoba Education and Youth,
Assessment and Evaluation Branch,
Winnipeg, Manitoba R3E 3J5

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Note to teacher:

A variety of organizational structures and types of responses to the Comparative Car Shopping Project is anticipated.

This document provides a sample response to the Project. Its purpose is to assist teachers in detecting reasonable calculations and sufficient data when scoring student projects.

Student explanations for their decision-making will vary. When determining which vehicle to purchase, students may consider many issues, including:

- long term budgetary plans
- reliability of the vehicle
- affordability of the vehicle (including insurance costs)
- preferred manufacturer of the vehicle
- anticipated use for the vehicle
- preferred features of the vehicle

Consumer Mathematics (40S)—Project Scoring Rubric
Comparative Shopping Project—Specific Guidelines:

RUBRIC	COMPARATIVE SHOPPING PROJECT	LEVEL 1	LEVEL 2	LEVEL 3
Format	→ Title page, introduction, heading/subheadings, conclusion/justification for decisions	**See Project Scoring Rubric for level descriptors**		
Data Content	→ Cost and condition of two vehicles → Presentation of charts/tables/graphs → Anticipated use of selected vehicle → Comparison of insurance rates for two vehicles → Calculation of car payment within a stated budget → Choice of car payment terms for selected vehicle → Statement of financial/family situation using a monthly budget → Justification for purchase decisions			
Data Interpretation	→ Terminology and knowledge related to vehicle costs and budgeting → Reflection/comparison of two vehicles → Analysis of tabular information → Analysis of costs - (car payments do not exceed 20% of monthly net income, financing rate at 6%); consideration of mortgage, utilities and property insurance → Mathematical procedures			
Concepts	→ Reading tables → Problem solving → Analysis of numbers → Realistic budgeting → Relation of personal preferences to economic possibilities			

Sample

Sample Student Response

Comparison of Vehicles

Chevrolet Cavalier 2001	
Cost	$10 200
Insurance	$1 216
Total	$11 416

Ford Focus 2001	
Cost	$16 980
Insurance	$1 146
Total	$18 126

Comparison Total: $18 126 – $11 416 = $6 710

The Ford Focus is $6 710 (including insurance) more expensive than the Chevrolet Cavalier and has 12 000 more has kilometres on the odometer. The options are almost the same. The Ford Focus has dual airbags and tinted glass. The Cavalier only has a driver air bag but it has keyless entry. The insurance for the Ford Focus is $70 a year less than the Cavalier. Since my budget is limited the differences aren't worth $6 710. I select the Cavalier.

Anticipated Use of Vehicle

I will be using the car to travel around my community and to get to work. I won't be taking any long distance trips, so the difference in gas usage between city and highway (338 mi./451 mi.) doesn't affect my choice of car. The fact that the car has uncomfortable seats isn't an issue because I won't be travelling for long periods of time in the car.

Car Payments

Cost of Vehicle	$10 200
Down Payment	$2 500
Interest rate	6%

Five Year Loan Plan $19.40 per $1 000 principal per month

Calculations

$$\begin{array}{r} \$10\,200 \\ \underline{-\ \$2\,500} \\ \$7\,700 \end{array}$$

$$\begin{array}{r} \$19.40 \\ \underline{\times\ \ 7.7} \\ \$149.38 \end{array}$$ per month for 5 years.

Budget

PART A: Net Income (Annual)

Wages/Salary	2 2800.00	
Other (specify) ______________	—	
Total Annual Net Income	2 2800.00	
Average Monthly Net Income		1 900.00

PART B: Expenses (Monthly)

Mortgage	550.00*		
Food	400.00		
Transportation	100.00		
Recreation/Entertainment	50.00	Gasoline	
Savings	50.00		
Loan Payments	149.38	car (for 5 years)	
Utilities	200.00*		
Insurance	50.00*		
Gifts/Charitable Donations	—		
Personal	—		
Clothing	40.00		
Other (specify) Autopac	101.34		
Total Expenses			1 690.72

PART C: Balance

Monthly Net Income — Total Expenses = Amount Extra 209.28

*Amounts are listed for students Project Resource Package

Sample

Justification

With a very limited budget I have to select an inexpensive but reliable car. I can afford to pay $149.38 per month for the Cavalier and still have some money left over in case something unplanned happens. Although I pay more for the car by choosing a five year repayment plan, the monthly payments are more affordable. The more expensive cars would be nice to have but on my salary, I might not be able to make the monthly payments and still pay other bills that I have.

Sample

Senior 4 Consumer Mathematics (40S) Standards Test

Project Scoring Guide

Semester 2
2003

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Recommended Project Scoring Strategy

Project Scoring Rubric

The scoring rubric for the Project for the Senior 4 Consumer Mathematics Standards Test is based on the student learning outcomes and standards found in the *Senior 4 Mathematics—Manitoba Curriculum Framework of Outcomes and Senior 4 Standards (2001)*.

The scoring rubric is designed to assess a wide range of student performance. This rubric distinguishes Senior 4 student performance into three levels: Level 1 (Below Level), Level 2 (At Level), and Level 3 (Above Level). Level 1 and Level 2 are further divided into two sub-categories: Approaching Level 2 and Approaching Level 3. This subdivision of the levels allows markers to detect and identify student performance that is nearing these levels, but has not yet consistently demonstrated all or most of its requirements. Level 3 however, consists of one category for scoring the Project.

The *Project Scoring Rubric* consists of four elements:

Format:	Impression, structure and organization
Data Content:	Data collection, selection and presentation
Data Interpretation:	Data reflection, analysis and mathematics procedures
Concepts:	Mathematical concepts, connections, synthesis and solutions

Dimension 1 – Format

THE MARKER HOLISTICALLY SCANS THE PROJECT

This scoring dimension focuses on overall structure and organization. The marker is answering the question, "Generally, is the project inviting, easy to follow, carefully constructed?" The following marking strategy is recommended:

- Scan the student project.
- Form a general, holistic sense of the project based on the fact that Level 2 is considered "at standard".
- Read the descriptors under Level 2 (which are identical to the outcomes) and decide if they appropriately describe the project you have scanned. If not, read the descriptors of the level above or below.
- If only some of the descriptors in a particular level of performance fit, determine the degree to which the project is approaching the next or previous level and whether the "approaching level" is a more appropriate description of the project.

Dimensions 2 and 3 – Data Content/Interpretation

THE MARKER HOLISTICALLY READS THE PROJECT

Dimensions 2 and 3 focus on data and mathematical procedures. The marker is answering the question, "Is the data relevant and presented in a reader-friendly way?" and "Has data been manipulated using consumer mathematics terminology, skills and strategies?" The following marking strategy is recommended:

- Look for evidence relating to data; more specifically, look for evidence of data collection, selection and presentation as well as reflection, analysis and mathematical procedures.
- Check the *Sample Response to Project* booklet for a sense of accurate use of data.
- Score these two dimensions by having an in-depth look at the student's project.

- For each dimension, determine which performance level best describes the project.
- Check individual descriptors. If the work is not at a specific level, consider an "approaching level".

Dimension 4 – Concepts

THE MARKER HOLISTICALLY REFLECTS ON THE PROJECT

Dimension 4 focuses on mathematical concepts, the connection and synthesis of ideas and solutions. The marker is answering the question, "Generally, was there a sense that the student grasped essential mathematical concepts throughout the project?" The following marking strategy is recommended:

- Recall the student's project.
- In a holistic way, consider the project in terms of the degree of evidence that the student grasped essential mathematical concepts.

Overall, determine which level of performance best describes the use of general concepts throughout the project.

Recording of Marks

- Match the pre-printed booklet identification number on the *Scoring* (scan) *Sheet* with the identification number written on each student's project.
- **Always** use an HB pencil to complete the *Scoring* (scan) *Sheet*(s).
- Indicate each student's score in each dimension by writing and by shading the corresponding mark value.
- Keep a photocopy of the *Attendance Form*(s). It is the only record connecting students to their work and to the *Project Scoring* (scan) *Sheet*(s).
- Keep a copy of the *Project Scoring* (scan) *Sheets* (optional) for school records.
- Forward the original *Project Scoring* (scan) *Sheets* to the department according to the instructions in the *Administration Manual for Supervising Teachers.*

Project Recording Sheet

A copy of the *Project Scoring Sheet* is provided on page 5. This sheet may be photocopied for use as a *Double Marking Sheet* for the Project component when a two-marker system is employed. When double marking, the booklet number of the Project being marked must replace the MET number on the photocopied Scoring Sheet. Remember: final scores on the Project component must be submitted to the department on the official, scannable *Project Scoring Sheets.*

Reporting of Marks

A sample *Project Scoring Sheet* for the Project component is provided on page 5. This sample represents the scannable sheets that must be used to record the marks from the Project component of the standards test.

If you would like an example of calculating a student's final mark on all components of the standards test, please see page 29 in the *Information for Local Marking Co-ordinators*.

Project Scoring Preparations for Local Marking Using the Centralized Marking Model

Selection of exemplars for training markers

- From the student projects, select 3–5 samples to be used in familiarizing the markers with the *Project Scoring Guide* and the *Project Scoring Rubric*. The training exemplars should cover a range of performance (weak, typical and strong). The selection can be conducted by the Local Marking Co-ordinator and/or a small group of volunteer colleagues (markers/team leaders).
- Mark the selected training exemplars using the *Project Scoring Guide*. Provide all markers with a copy of all the training exemplars. Then use the *Project Scoring Rubric* to mark these booklets and discuss the scoring with the team as part of the training.

Selection of exemplars for marking reviews

Exemplars are selected to review marking consistency. Based on the number of reviews planned, select an appropriate number of *Projects* to be marked. Score these *Projects* with a small group of markers (team leaders). Photocopy the selected *Projects* according to the total number of markers. The selection of exemplars can be conducted when the training exemplars are being chosen.

Marker training

Markers review the Projects, the *Project Scoring Guide*, the *Project Scoring Rubric* and examine student exemplars. They also practice with training exemplars.

Mark projects

- When training is completed, each marker takes one bundle of projects and starts marking. Markers record marks on the *Project Scoring* (scan) *Sheet*(s).
- Careful application of the *Project Scoring Rubric* will ensure high levels of consistency.
- A copy of a *Project Scoring Sheet* is found on page 5. If a double marking model is adopted, please use two copies of the *Project Scoring Sheet*. Booklet ID numbers need to be noted on both *Project Scoring Sheets*.
- When using the two-marker system, a local decision regarding discrepancies between first and second marking must be made prior to marking session. An individual must be designated to transcribe the final marks on the official *Scoring* (scan) *Sheet*(s).

Once marking is completed

- When marking is completed, remove the *Scoring* (scan) *Sheet* from each project.
- After a bundle has been marked, verify that each *Scoring* (scan) *Sheet* has been completed correctly.

Projects and *Scoring* (scan) *Sheets* can be put in numerical order for easy retrieval.

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PLEASE DO NOT WRITE IN THIS AREA

[SERIAL]

Senior 4 Consumer Mathematics (40S) Standards Test—2003

Project Scoring Sheet

INSTRUCTIONS

- Use an HB pencil only.
- Do not use ballpoint or felt tip pens.
- Do not mark other areas on this form.
- Shade the appropriate circle.
- Erase cleanly any marks you wish to change.

CORRECT: ● INCORRECT: ✓ ✗ ◒ ◔

IMPORTANT: Please verify that the above number corresponds with the student's number on the *Attendance Form* and on the student's project.

		No mark	Level 1	Approaching Level 2	Level 2	Approaching Level 3	Level 3	
Format	**Impression/Structure/Organization** **Generally, is the project inviting, easy to follow, carefully constructed?** • Impression • Structure (e.g., introduction, body, conclusion, headings, sections...) • Organization of ideas	⓪	①	②	③	④	⑤	112
(15)	**SUBTOTAL (3 x Level)**							
Data—Content	**Data Collection/Selection/Presentation** **Is the data relevant and presented in a reader-friendly way?** • Collection • Selection • Presentation (e.g., charts, tables, diagrams, graphs)	⓪	①	②	③	④	⑤	113
(30)	**SUBTOTAL (6 x Level)**							
Data—Interpretation	**Data Reflection/Analysis/Mathematical Procedures** **Has data been manipulated using consumer mathematics terminology, skills and strategies?** • Terminology and Knowledge • Reflection • Analysis (analysis, comparison, recognition of patterns) • Mathematical procedures	⓪	①	②	③	④	⑤	114
(40)	**SUBTOTAL (8 x Level)**							
Concepts	**Concepts/Connections/Synthesis/Solutions** **Generally, is there a sense that the student grasped essential mathematical concepts throughout the project?** • Solutions • Synthesis • Connections	⓪	①	②	③	④	⑤	115
(15)	**SUBTOTAL (3 x Level)**							

MET No.: ______________________	**TOTAL SCORE** **/100**

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[SERIAL]

Senior 4 Consumer Mathematics (40S) Standards Test — 2005

Project Scoring Sheet

INSTRUCTIONS

- Use an HB pencil only.
- Do not use ballpoint or felt tip pens.
- Do not mark other areas on this form.
- Shade the appropriate circle.
- Erase cleanly any marks you wish to change.

CORRECT ● INCORRECT ✓ ✕ ▬ •

IMPORTANT: Please verify that the above number corresponds with the student's number on the *Attendance Form* and on the student's project.

		No mark	Level 1	Approaching Level 2	Level 2	Approaching Level 3	Level 3
Format	**Impression/Structure/Organization** **Generally, is the project inviting, easy to follow, carefully constructed?** • Impression • Structure (e.g., introduction, body, conclusion, headings, sections...) • Organization of ideas	○	○	○	○	○	○
(15)	SUBTOTAL (3 x Level)						
Data—Content	**Data Collection/Selection/Presentation** **Is the data relevant and presented in a reader-friendly way?** • Collection • Selection • Presentation (e.g., charts, tables, diagrams, graphs)	○	○	○	○	○	○
(30)	SUBTOTAL (6 x Level)						
Data—Interpretation	**Data Reflection/Analysis/Mathematical Procedures** **Has data been manipulated using consumer mathematics terminology, skills and strategies?** • Terminology and Knowledge • Reflection • Analysis (analysis, comparison, recognition of patterns) • Mathematical procedures	○	○	○	○	○	○
(40)	SUBTOTAL (8 x Level)						
Concepts	**Concepts/Connections/Synthesis/Solutions** **Generally, is there a sense that the student grasped essential mathematical concepts throughout the project?** • Solutions • Synthesis • Connections	○	○	○	○	○	○
(15)	SUBTOTAL (3 x Level)						

MET No.: ______________________	TOTAL SCORE /100

	Consumer Mathematics 40S PROJECT Scoring Rubric New	Level 1 Project	Level 2 Project	Level 3 Project
Format	**Impression/Structure/ Organization**	**Incomplete Project:** *Inconsistent or incomplete project*	**Complete Project:** *Clear and complete project*	**Clear, Complete Project:** *Clear, coherent, and complete project*
	• Impression	• Unclear arrangement; partially legible	• Clear arrangement; legible	• Logical and clear arrangement; legible
	• Structure (e.g., introduction, body, conclusion, headings, sections…)	• Haphazard structure; loosely relates to requirements of project	• Clear structure; relates to requirements of project	• Structure is clear and effective for project
	• Organization of Ideas	• Disorganized ideas	• Organized ideas	• Organized ideas
Data—Content	**Data Collection/Selection/ Presentation**	**Limited Data:** *Lacks a central focus; details are sketchy or not present*	**Routine Data:** *Some focus; clarity may be limited*	**Thorough/Insightful Data:** *Insightful thinking for selection of data*
	• Collection (required elements)	• Limited number of required elements present	• All required elements present	• All required elements present and easy to follow
	• Selection	• Incomplete exploration of concepts, patterns or relationships	• Complete exploration of data; analyzes, compares, recognizes patterns	• Insightful exploration of data; links analysis of concepts, patterns or relationships
	• Presentation (e.g., charts, tables, diagrams, graphs)	• Incomplete/limited, or unconnected presentation of data; some data unrelated to project	• Relevant presentation of data; some data loosely connected	• Relevant and connected presentation of data.
Data—Interpretation	**Data Reflection/Analysis/ Mathematical Procedures**	**Limited Use of Procedures:** *Imprecise use of mathematical terms, principles, or procedures*	**Appropriate Use of Procedures:** *Appropriate use of mathematical terms, principles, or procedures*	**Full Use of Appropriate Procedures:** *Principles used efficiently while justifying the solution*
	• Terminology and Knowledge	• Limited knowledge; inappropriate or limited use of basic terms	• General knowledge and appropriate use of basic terms	• Integrated use of appropriate terms and knowledge
	• Reflection	• Weak, random statements, no generalization related to project	• Correct statements; some generalizations related to project	• Correct statements; appropriate generalizations related to project
	• Analysis (analysis, comparison, recognition of patterns)	• Weak/limited decisions/conclusions based on data	• Relevant decisions/conclusions based on most data	• Direct link between decisions/conclusions and data
	• Mathematical procedures	• Basic procedures correct; major computational errors	• Generally correct; some computational errors	• Specific/effective procedures correct; minor computational errors
Concepts	**Concepts/Connections/ Synthesis/Solutions**	**Partial Understanding:** *Concepts throughout project are related or applied inconsistently*	**General Understanding:** *Uses general concepts throughout the project*	**Clear Understanding:** *Uses all relevant concepts throughout the project*
	• Solutions	• Partial explanation of situation/context of project	• General explanation of situation/context of project	• Clear explanation of situation/context of project
	• Synthesis	• Some ideas are unrelated to mathematical concepts; errors in reasoning	• Most ideas relate to mathematical concepts; logical reasoning	• All ideas link mathematical concepts together; insightful reasoning
	• Connections	• Weak/partial connection between mathematical concepts and everyday activities	• General connection between mathematical concepts and everyday activities	• Direct link between mathematical concepts and everyday activities

Performance Level:	Level 1	Approaching Level 2	Level 2	Approaching Level 3	Level 3

Senior 4 Consumer Mathematics (40S) Standards Test

Written Test
Student Booklet

June 2003

Manitoba
Education
and Youth

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Senior 4 Consumer Mathematics (40S)
Standards Test—June 2003
Written Test Student Booklet

DESCRIPTION

Total Possible Marks: 40 **Maximum Time: 90 minutes**

This component of the test consists of six parts:

Learning Unit	**Suggested Time to Complete**	**Marks**
Personal Finance	7 minutes	8
Government Finances	6 minutes	7
Statistics	7 minutes	6
Design and Measurement	7 minutes	8
Variation and Formulas	5 minutes	5
Investments	8 minutes	6

- Students may use the resource package containing formulas and tables.
- Use of a calculator and ruler is required.
- Read all instructions on the test carefully.
- **If you need more space to answer a question, extra pages may be provided by your teacher. Write your booklet ID number and question number on any extra page(s) used and staple it (them) into the booklet where your answer begins.**

Remember to:

- Show all your work in this booklet
- Use your resource package
- Use a calculator
- Use a ruler

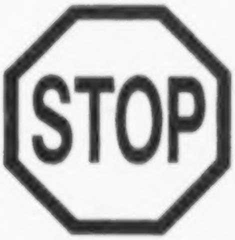
DIRECTIONS

- Show **complete answers** in the space(s) provided in your student booklet
- Let the mark values for each question guide you in answering it.
- Show all your work.
- Use your resource package.
- Provide explanations and justifications.
- Use a systematic and well-organized method in communicating the answer.

Directing Words

Some questions may include directing words such as *explain, illustrate,* and *calculate*. These words are explained below.

The Word	The question is asking for...
identify/name/list/state	a label or title of an item, concept or method
defend/justify/support	an explanation, information, or evidence that shows why your method, idea or answer is good
explain/describe/express	words or symbols, diagrams, a chart or graph, or other methods that **make clear** what you mean or what you are thinking
illustrate/sketch	a reasonably neat picture or diagram (not necessarily to scale) that shows or explains an idea or method
draw	a diagram to scale that shows or explains an idea or method
calculate/find/determine	a mathematical formula or algebraic equation or numerical calculation to solve a problem



PLEASE WAIT UNTIL THE TEACHER TELLS YOU TO TURN THE PAGE.

Personal Finance

DO NOT USE

3 Marks

1. Jane Smith is a 27-year-old non-smoker. She is interested in purchasing a 10-year term life insurance policy with a face value of $150 000. 116

   A) Calculate her annual premium.

   B) Calculate her monthly premium.

2 Marks

2. Catherine Olsen rents an apartment in Thompson. Her personal possessions have a replacement value of $55 000. Catherine chooses comprehensive tenant's insurance with a $200.00 deductible. 117
   Calculate her annual insurance premium.

3 Marks

DO NOT USE

118

3. Robert and Lynne Dull purchase a house for \$125 000. They make a down payment of \$35 000 on the house and take out a fixed rate mortgage at 7.75% for the balance of the purchase price. The mortgage is amortized over 20 years.

   A) Determine the Dull's monthly mortgage payment.

   B) Calculate the total amount of interest they will pay over the life of the mortgage.

Government Finances

DO NOT USE

3 Marks

4. A local jewellery store is considering importing gold earrings from either England or Mexico to save costs. The chart below shows their current manufacturing costs.

119

England	390 pounds/100 g.
Mexico	5157 pesos/100 g.

A) Convert the manufacturing costs into Canadian dollars. (Round your final answer to the nearest cent.)

B) Justify which country saves the most for the jewellery store. Use the manufacturing costs, the exchange rates, customs duties and excise taxes in your answer.

2 Marks

DO NOT USE

120

5. Hyatt purchases 40 litres of gasoline at a price of 66.5 cents/litre.

   A) Calculate the total cost of Hyatt's gas purchase.

   B) Calculate the amount of the total purchase that is gasoline tax.

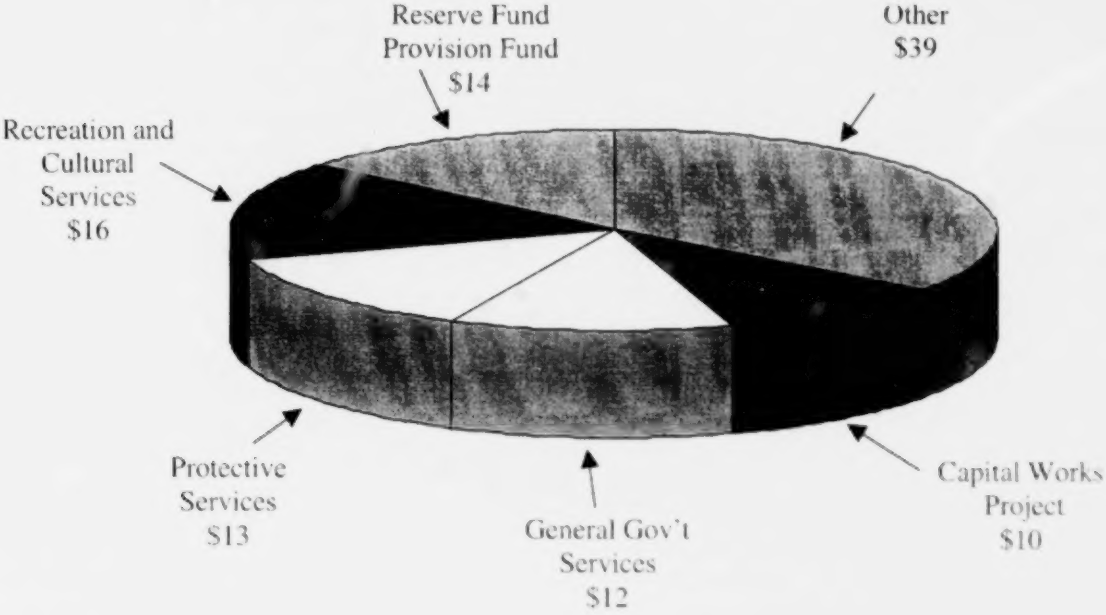
2 Marks

DO NOT USE

121

6. Calculate the percentage of the total municipal expenditures allocated to protective services for the city of Swindon using the pie chart below.

Major Municipal Expenditures (in millions)



Statistics

3 Marks

7. The chart below shows the points scored by Jim Malone in 11 basketball games. 122

A) Complete the standard deviation table.

Game	Points (x)	Difference from Mean ($x - \overline{x}$)	Square of Difference $(x - \overline{x})^2$
1	12		
2	41		
3	16		
4	22		
5	40		
6	34		
7	21		
8	30		
9	35		
10	29		
11	28		
TOTAL	Sum		Sum

B) Find the standard deviation for Jim's basketball points, using the above table. (Round your final answer to 1 decimal place.)

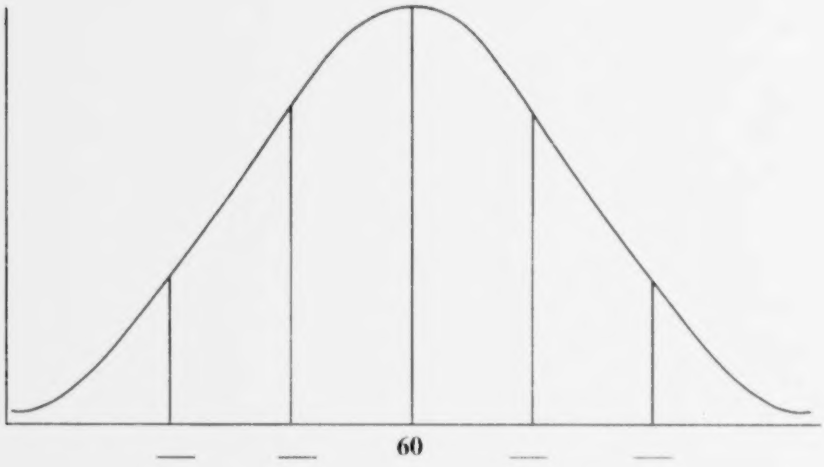
2 Marks

DO NOT USE

123

8. The mean number of chocolate-coated candy per bag is 60 candies. The standard deviation for the number of candies is 2.5. Assuming that the distribution follows a normal curve, answer the following questions:

A) Identify the missing values from the distribution curve.



B) Find the percent of bags of candies that you would expect to have 65 or more candies in them.

C) Determine how many bags of candy per case would likely have fewer than 57.5 candies in them. The chocolate-coated candies are shipped in cases of 200 bags each.

1 Mark

DO NOT USE

124

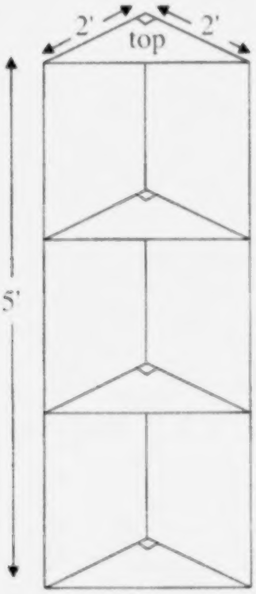
9. An article in the college paper states that the cut off for general entrance is the 62^{nd} percentile. Jane has a 70% Senior 4 average. She did not get into the college. Explain how Jane's 70 percent is different from the 62^{nd} percentile.

Design and Measurement

2 Marks

10. Marie is planning to build a corner-shelving unit. Each of the two sides measure 2' × 5'. The unit has four triangular-shaped shelves (see drawing). 125

Draw the constituent parts on the given graph paper using a scale of 1:12.



(continued on next page)

DO NOT USE

2 Marks

DO NOT USE

126

11. Draw an oblique projection of a rectangular slab of fudge with the given measurements:

length: 6 inches width: 4 inches height: 1 inch

Use the ¼ inch graph paper provided.
Include an appropriate scale.

2 Marks

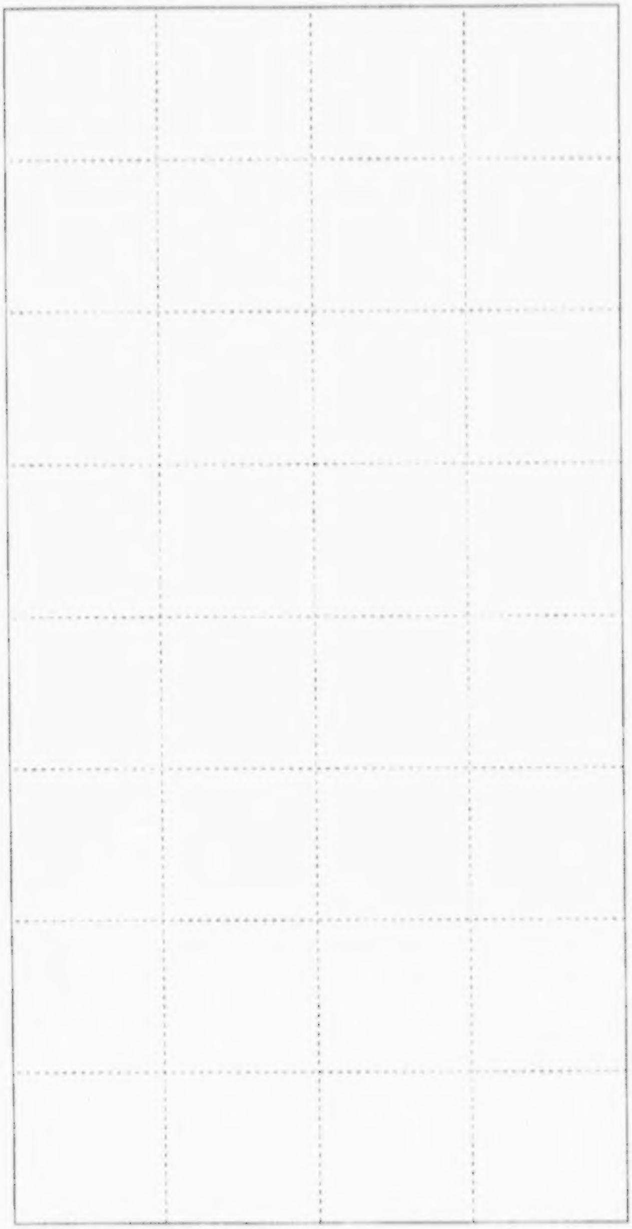
DO NOT USE

127

12. Bill wishes to build an open-backed bookshelf. The three shelves and the top each measure 1' × 4' and the two sides each measure 1' × 3'. The pieces are cut from a single sheet of 4' × 8' plywood.

State how many square feet of plywood would be unused.

Template for 4' × 8' sheet of plywood



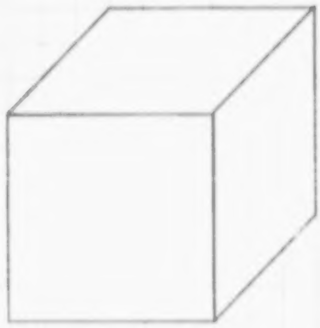
2 Marks

DO NOT USE

128

13. Sketch a diagram in exploded format for the six-sided cube shown below. Use the graph paper provided.

each square = ½ cm



Variation and Formulas

DO NOT USE

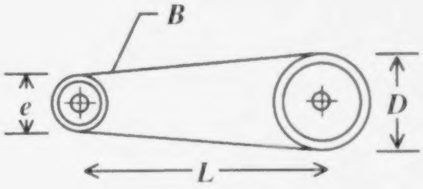
2 Marks

14. The length of a conveyor belt (B) that connects to pulleys of different sizes is given by the formula:

129

$$B = 2L + 3.25\left(\frac{D+e}{2}\right)$$

LENGTH OF CONVEYOR BELT



Find the length of the conveyor belt (in centimetres) if:
$L = 114$ cm, $D = 22$ cm, $e = 18$ cm.
(Round your answer to the nearest centimetre).

3 Marks

DO NOT USE

130

15. Mr. Cunningham is planning a Senior 4 field trip to see a modern art exhibit. It costs $10 per student to get into the art gallery. The fixed cost of transportation is $300.

    A) Calculate the total cost of taking 25 students to the art gallery.

    B) Identify the type of variation in the cost of the trip.

    C) Express this variation as an equation substituting the field trip information and using the variables:

       C = total cost
       n = number of students

    D) Calculate the number of students on the trip if the trip costs $720.

Investments

DO NOT USE

1 Mark

16. State the meaning of "rate of return" in terms of financial investments. 131

2 Marks

17. A) Define the term "stocks" in terms of investments. 132

B) Describe how stocks are bought and sold.

3 Marks

DO NOT USE

133

18. Mary has a $100 000 insurance policy that has a cash surrender value of $26 000. She owns a home valued at $126 000 with a mortgage of $66 000. She has $14 000 in Canada Savings Bonds and drives a Chevrolet Malibu valued at $22 000. She owes $12 000 on the car and her credit card debt is $4 600.

    A) List Mary's assets and liabilities based on the above information.

    B) Calculate Mary's net worth.

    C) Calculate Mary's debt equity ratio.

DO NOT USE

DO NOT USE

DO NOT USE

[redacted]

Senior 4 Consumer Mathematics (40S) Standards Test

Written Test
Resource Package

2003

Manitoba
Education
and Youth

RULER

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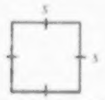
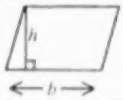
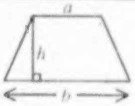
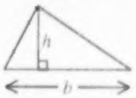
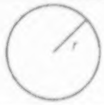
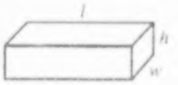
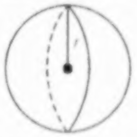
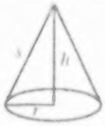
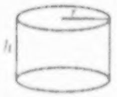
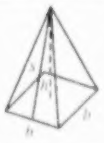
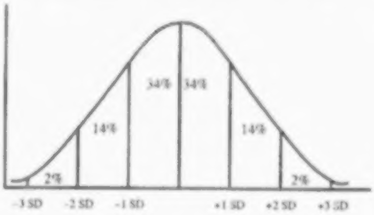
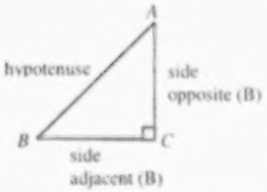
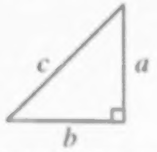
Formula List

Name of Formula	Diagram	Formula
area of a square		$A = s^2$
area of a rectangle		$A = lw$
area of a parallelogram		$A = bh$
area of a trapezoid		$A = \frac{1}{2}(a + b)h$
area of a triangle		$A = \frac{1}{2}bh$
area of a circle		$A = \pi r^2$
surface area of a rectangular solid		$SA = 2lw + 2lh + 2wh$
volume of a rectangular solid		$V = lwh$
surface area of a sphere		$SA = 4\pi r^2$
volume of a sphere		$V = \frac{4}{3}\pi r^3$
surface area of a cone		$SA = \pi rs + \pi r^2$
volume of a cone		$V = \frac{1}{3}\pi r^2 h$
surface area of a cylinder		$SA = 2\pi rh + 2\pi r^2$
volume of a cylinder		$V = \pi r^2 h$
surface area of a pyramid		$SA = 2bs + b^2$
volume of a pyramid		$V = \frac{1}{3}b^2 h$

Formula List

Name of Formula	Diagram	Formula
Normal Distribution		
Standard Deviation	$\sum$ = sum S = standard deviation x = observed score $\overline{x}$ = mean n = total number of observations	$S=\sqrt{\frac{\Sigma(x-\overline{x})^2}{n-1}}$
Percentile Rank	B = number of raw scores below the given score E = number of raw scores equal to the given score, including the given score n = total number of raw scores	$P=\left(\frac{B+0.5E}{n}\right)\times 100$
Direct Variation	A = dependent variable k = constant of variation B = independent variable	$A=kB$
Inverse Variation	A = dependent variable k = constant of variation B = independent variable	$A=\frac{k}{B}$
Partial Variation	C = dependent variable k = constant of variation n = independent variable F = fixed value	$C=F+kn$

Formula List

Name of Formula	Diagram	Formula
trigonometric formulas for right-angled triangles	 A hypotenuse side opposite (B) B C side adjacent (B)	$\sin \angle B = \frac{\text{side opposite}}{\text{hypotenuse}}$ $\cos \angle B = \frac{\text{side adjacent}}{\text{hypotenuse}}$ $\tan \angle B = \frac{\text{side opposite}}{\text{side adjacent}}$
Pythagorean Theorem for right triangles		$c^2 = a^2 + b^2$

Simple Interest	P = principal r = annual interest rate t = time in years I = interest	$I = Prt$
Compound Interest	*A = final amount* *P = principal* *r = annual interest rate* *n = number of times a year interest is compounded* *t = time in years*	$A = P\left(1 + \frac{r}{n}\right)^{nt}$
Debt Equity Ratio		$\text{DER} = \frac{\text{Total Liabilities} - \text{Mortgage}}{\text{Net Worth}} \times 100 \; [= \%]$
Net Worth		Net Worth = Assets – Total Liabilities
Property Tax Rate		$\text{PTR} = \frac{\text{Total Revenue Required}}{\text{Total Portioned Assessment}} \times 1000 \; [= \text{mills}]$

Gasoline Tax	Gasoline: 11.5¢/L Diesel Fuel: 10.9¢/L
Tobacco Taxes	per cigarette: 8¢ per carton (of 200 cigarettes): $16.00 loose tobacco: 5.3¢ per gram

Temperature	F = degrees Fahrenheit C = degrees Celsius	$F = \frac{9}{5}C + 32$ $C = \frac{5}{9}(F - 32)$

Table 1: 10-Year Term Insurance

	Term Plus											
	Male Non-Smoker			Female Non-Smoker			Male Smoker			Female Smoker		
	Issue Rate per $1000			Issue Rate per $1000			Issue Rate per $1000			Issue Rate per $1000		
AGE	$100 000 $249 999	$250 000 $499 999	$500 000 $3 000 000	$100 000 $249 999	$250 000 $499 999	$500 000 $3 000 000	$100 000 $249 999	$250 000 $499 999	$500 000 $3 000 000	$100 000 $249 999	$250 000 $499 999	$500 000 $3 000 000
20	0.85	0.81	0.77	0.80	0.76	0.73	1.43	1.36	1.30	1.32	1.25	1.20
21	0.85	0.81	0.77	0.80	0.76	0.73	1.43	1.36	1.30	1.32	1.25	1.20
22	0.85	0.81	0.77	0.80	0.76	0.73	1.43	1.36	1.30	1.32	1.25	1.20
23	0.85	0.81	0.77	0.80	0.76	0.73	1.43	1.36	1.30	1.32	1.25	1.20
24	0.85	0.81	0.77	0.80	0.76	0.73	1.43	1.36	1.30	1.32	1.25	1.20
25	0.85	0.81	0.77	0.80	0.76	0.73	1.43	1.36	1.30	1.32	1.25	1.20
26	0.86	0.82	0.78	0.80	0.76	0.73	1.47	1.40	1.34	1.33	1.27	1.21
27	0.87	0.83	0.79	0.80	0.76	0.73	1.52	1.44	1.39	1.34	1.28	1.22
28	0.88	0.84	0.80	0.80	0.76	0.73	1.56	1.49	1.42	1.35	1.29	1.23
29	0.89	0.85	0.81	0.80	0.76	0.73	1.61	1.53	1.46	1.36	1.30	1.24
30	0.90	0.86	0.82	0.80	0.76	0.73	1.65	1.57	1.51	1.38	1.31	1.25
31	0.96	0.91	0.87	0.86	0.82	0.78	1.78	1.69	1.62	1.47	1.40	1.34
32	1.02	0.97	0.93	0.92	0.87	0.84	1.91	1.82	1.74	1.57	1.50	1.43
33	1.08	1.03	0.98	0.98	0.93	0.89	2.05	1.95	1.86	1.67	1.58	1.52
34	1.14	1.08	1.04	1.04	0.99	0.95	2.18	2.07	1.98	1.77	1.68	1.62
35	1.20	1.14	1.09	1.10	1.05	1.00	2.31	2.20	2.10	1.87	1.78	1.71
36	1.34	1.27	1.22	1.17	1.11	1.06	2.60	2.46	2.37	2.02	1.93	1.84
37	1.48	1.41	1.35	1.24	1.18	1.13	2.88	2.74	2.62	2.18	2.07	1.98
38	1.62	1.54	1.47	1.31	1.24	1.19	3.17	3.01	2.88	2.33	2.21	2.12
39	1.76	1.67	1.60	1.38	1.31	1.26	3.45	3.28	3.15	2.49	2.37	2.27
40	1.90	1.81	1.73	1.45	1.38	1.32	3.74	3.55	3.40	2.64	2.51	2.40
41	2.06	1.96	1.87	1.56	1.48	1.42	4.22	4.02	3.84	2.90	2.76	2.64
42	2.22	2.11	2.02	1.67	1.59	1.52	4.71	4.48	4.28	3.17	3.01	2.88
43	2.38	2.26	2.17	1.78	1.69	1.62	5.19	4.93	4.73	3.43	3.26	3.12
44	2.54	2.41	2.31	1.89	1.80	1.72	5.68	5.39	5.17	3.70	3.51	3.37
45	2.70	2.57	2.46	2.00	1.90	1.82	6.16	5.85	5.61	3.96	3.76	3.61
46	3.03	2.88	2.76	2.23	2.12	2.03	6.60	6.27	6.01	4.49	4.27	4.08
47	3.36	3.19	3.06	2.46	2.34	2.24	7.04	6.69	6.40	5.02	4.76	4.57
48	3.69	3.51	3.36	2.69	2.56	2.45	7.48	7.11	6.81	5.54	5.27	5.05
49	4.02	3.82	3.66	2.92	2.77	2.66	7.92	7.52	7.21	6.07	5.76	5.52
50	4.35	4.13	3.96	3.15	2.99	2.87	8.36	7.94	7.61	6.60	6.27	6.01
51	4.88	4.64	4.44	3.40	3.23	3.09	9.26	8.80	8.43	7.24	6.88	6.59
52	5.41	5.14	4.92	3.65	3.47	3.32	10.16	9.66	9.25	7.88	7.48	7.17
53	5.94	5.64	5.41	3.90	3.71	3.55	11.07	10.52	10.07	8.51	8.09	7.74
54	6.47	6.15	5.89	4.15	3.94	3.78	11.97	11.37	10.89	9.15	8.69	8.33
55	7.00	6.65	6.37	4.40	4.18	4.00	12.87	12.23	11.72	9.79	9.31	8.91
56	7.60	7.22	6.92	4.91	4.66	4.47	13.60	12.91	12.38	10.52	9.99	9.57
57	8.20	7.79	7.46	5.42	5.15	4.93	14.32	13.61	13.04	11.24	10.68	10.23
58	8.80	8.36	8.01	5.93	5.63	5.40	15.05	14.30	13.70	11.97	11.37	10.89
59	9.40	8.93	8.55	6.44	6.12	5.86	15.77	14.98	14.36	12.69	12.06	11.55
60	10.00	9.50	9.10	6.95	6.60	6.32	16.50	15.68	15.02	13.42	12.75	12.21
61	11.60	11.02	10.56	7.86	7.47	7.15	18.70	17.77	17.02	14.87	14.12	13.53
62	13.20	12.54	12.01	8.77	8.33	7.98	20.90	19.86	19.02	16.32	15.51	14.85
63	14.80	14.06	13.47	9.68	9.20	8.81	23.10	21.95	21.02	17.78	16.89	16.18
64	16.40	15.58	14.92	10.59	10.06	9.64	25.30	24.04	23.02	19.23	18.27	17.50
65	18.00	17.10	16.38	11.50	10.93	10.47	27.50	26.13	25.03	20.68	19.65	18.82
66	19.60	18.62	17.84	12.41	11.79	11.29	29.70	28.22	27.03	22.13	21.02	20.14
67	21.10	21.14	19.29	13.32	12.65	12.12	31.90	30.31	29.03	23.58	22.41	21.46
68	22.80	21.66	20.75	14.23	13.52	12.95	34.10	32.40	31.03	25.04	23.78	22.78
69	24.40	23.18	22.20	15.14	14.38	13.78	36.30	34.49	33.03	26.49	25.17	24.10
70	26.00	24.70	23.66	16.05	15.25	14.61	38.50	36.58	35.04	27.94	26.54	25.42
71	27.60	26.22	25.12	16.96	16.11	15.43	40.70	38.67	37.04	29.39	27.92	26.75
72	29.20	27.74	26.57	17.87	16.98	16.26	42.90	40.76	39.04	30.84	29.30	28.07
73	30.80	29.26	28.03	18.78	17.84	17.09	45.10	42.85	41.04	32.30	30.68	29.39
74	32.40	30.78	29.48	19.69	18.71	17.92	47.30	44.94	43.04	33.75	32.07	30.71

Add policy fee of $75 per year
Semi-annual payment (multiply annual premium by 0.52)
Monthly payment (multiply annual premium by 0.09)

Table 2: Whole-Life Insurance

	WHOLE-LIFE				
	Male Non-Smoker	Female Non-Smoker	Male Smoker	Female Smoker	
	Issue Rate Per $1000	Issue Rate Per $1000	Issue Rate Per $1000	Issue Rate Per $1000	
Issue Age	Premium Rate	Premium Rate	Premium Rate	Premium Rate	Issue Age
18	3.50	2.82	4.31	3.13	18
19	3.54	2.85	4.41	3.20	19
20	3.60	2.89	4.51	3.26	20
21	3.96	3.04	4.72	3.44	21
22	4.07	3.20	4.93	3.62	22
23	4.17	3.35	5.15	3.81	23
24	4.28	3.51	5.36	3.99	24
25	4.38	3.66	5.57	4.17	25
26	4.61	3.86	5.88	4.41	26
27	4.82	4.05	6.19	4.66	27
28	5.05	4.25	6.49	4.90	28
29	5.26	4.44	6.80	5.15	29
30	5.46	4.64	7.11	5.39	30
31	5.76	4.90	7.56	5.72	31
32	6.03	5.16	8.01	6.04	32
33	6.30	5.41	8.45	6.37	33
34	6.59	5.67	8.90	6.69	34
35	7.11	5.93	9.35	7.02	35
36	7.32	6.31	10.04	7.50	36
37	7.78	6.70	10.74	7.98	37
38	8.25	7.08	11.43	8.47	38
39	8.71	7.47	12.13	8.95	39
40	9.28	7.85	12.82	9.43	40
41	9.75	8.42	13.86	10.14	41
42	10.32	8.99	14.90	10.85	42
43	10.90	9.55	15.95	11.55	43
44	11.48	10.12	16.99	12.26	44
45	12.40	10.69	18.03	12.97	45
46	12.81	11.21	19.15	13.68	46
47	13.55	11.73	20.28	14.38	47
48	14.28	12.26	21.38	15.09	48
49	15.02	12.78	22.49	15.79	49
50	16.34	13.30	23.61	16.50	50
51	16.70	14.03	25.06	17.44	51
52	17.63	14.76	26.52	18.38	52
53	18.56	15.49	27.97	19.32	53
54	19.51	16.22	29.43	20.26	54
55	21.15	16.95	30.88	21.20	55
56	21.79	17.93	32.73	22.39	56
57	23.17	18.91	34.57	23.58	57
58	24.53	19.89	36.42	24.78	58
59	25.89	20.87	38.26	25.97	59
60	27.70	21.85	40.11	27.16	60
61	29.32	23.21	42.40	28.71	61
62	31.39	24.57	44.70	30.25	62
63	33.45	25.93	46.99	31.80	63
64	35.52	27.29	49.29	33.34	64
65	37.58	28.65	51.58	34.89	65
66	39.73	30.08	54.48	36.29	66
67	41.95	31.59	56.60	37.74	67
68	44.33	33.17	58.81	39.25	68
69	46.83	34.82	61.12	40.82	69
70	49.45	36.57	63.51	42.45	70
71	52.22	38.39	65.96	44.15	71
72	55.15	40.31	68.56	45.91	72
73	58.23	42.33	71.23	47.75	73
74	61.50	44.45	74.01	49.66	74
75	64.94	46.67	76.89	51.65	75

	Male Under 18	Female Under 18	
	Issue Rate Per $1000	Issue Rate Per $1000	
Issue Age	Premium Rate	Premium Rate	Issue Age
0	1.75	1.53	0
1	1.78	1.56	1
2	1.80	1.59	2
3	1.89	1.63	3
4	1.98	1.67	4
5	2.05	1.71	5
6	2.12	1.75	6
7	2.24	1.82	7
8	2.35	1.89	8
9	2.47	1.97	9
10	2.58	2.05	10
11	2.71	2.16	11
12	2.83	2.27	12
13	3.01	2.34	13
14	3.19	2.41	14
15	3.31	2.50	15
16	3.42	2.58	16
17	3.48	2.68	17

Add policy fee of $75.00 per year.

Semi-annual payment (multiply annual premium by 0.52)
Monthly payment (multiply annual premium by 0.09)

Table 3: Cash Surrender Values

WHOLE-LIFE

MALE Cash Surrender Value per $1000 of Sum Assured Issue Age											Policy	FEMALE Cash Surrender Value per $1000 of Sum Assured Issue Age										
20	25	30	35	40	45	50	55	60	65	70	Year	20	25	30	35	40	45	50	55	60	65	70
0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
1	1	1	2	3	5	7	9	11	15	18	4	1	1	1	1	2	4	5	7	9	12	16
2	3	4	6	8	14	18	23	28	35	41	5	1	2	3	5	7	11	14	19	24	30	37
4	6	8	11	14	23	29	36	44	54	64	6	3	4	6	8	11	18	23	30	38	48	58
6	8	11	15	20	32	40	50	61	74	87	7	4	6	9	12	16	25	33	42	52	65	79
7	10	14	19	25	40	51	64	78	94	110	8	6	8	11	15	20	32	42	53	67	83	100
8	13	18	24	30	49	62	77	94	113	133	9	7	10	14	19	24	40	51	65	81	100	121
10	15	21	28	36	58	73	91	111	133	156	10	9	12	16	22	29	47	60	76	95	118	142
14	21	29	38	52	91	109	130	152	175	201	11	12	17	23	30	42	75	91	111	133	158	186
17	27	37	48	68	124	145	168	193	218	245	12	15	22	29	38	56	103	122	146	171	199	231
21	34	44	58	83	157	181	207	234	260	290	13	18	27	36	46	68	131	154	181	208	239	275
24	40	52	68	99	190	217	246	275	303	335	14	20	32	42	55	81	160	185	216	246	280	319
28	46	60	78	115	223	252	284	316	345	380	15	23	37	49	63	94	188	216	251	284	320	364
33	54	73	94	141	256	288	323	356	387	424	16	28	44	59	76	116	216	247	285	321	361	408
39	62	86	110	167	289	324	362	397	430	469	17	32	50	70	89	138	244	278	320	359	401	453
44	69	99	126	193	322	360	401	438	472	514	18	37	56	80	103	159	273	310	355	397	442	497
50	77	112	142	219	355	396	439	479	515	558	19	41	63	91	116	181	301	341	390	434	482	542
55	85	125	158	245	388	432	478	520	557	603	20	46	69	102	129	203	329	372	425	472	523	586
63	96	140	181	284	405	451	499	544	587	626	21	52	78	114	149	237	348	393	448	498	555	627
71	107	154	204	324	423	470	520	588	616	650	22	59	87	126	168	272	367	414	471	525	587	669
78	117	169	226	363	440	489	541	592	645	673	23	65	96	138	188	306	387	435	494	551	618	710
86	128	183	249	403	458	508	562	616	675	698	24	71	105	151	207	341	406	456	517	578	650	752
94	139	198	272	442	475	527	582	640	705	726	25	78	114	163	226	375	425	477	540	604	682	793
105	154	217	312	458	493	546	603	664	734	756	26	87	126	179	262	393	444	498	563	630	714	834
116	168	236	353	474	510	565	624	688	764	794	27	96	139	195	297	411	463	519	586	657	746	876
127	183	254	393	490	528	583	645	712	793	841	28	105	151	212	332	429	482	539	609	683	777	917
138	197	273	434	506	545	602	666	736	823	906	29	114	163	228	367	446	502	560	632	710	809	959
149	212	292	474	522	563	621	687	760	852	1000	30	124	176	244	402	464	521	581	655	736	841	1000
164	231	333	489	538	580	640	708	784	882	-	31	136	192	276	419	482	540	602	678	762	873	-
179	250	374	504	554	598	659	729	808	911	-	32	149	209	308	436	500	559	623	701	789	905	-
193	269	415	519	570	615	678	749	832	941	-	33	161	225	340	453	518	578	644	724	815	936	-
208	288	456	534	585	633	697	770	856	970	-	34	174	241	372	470	536	597	665	747	842	968	-
223	307	497	549	601	650	716	791	880	1000	-	35	186	258	404	487	554	617	686	770	868	1000	-
242	348	511	564	617	668	735	812	904	-	-	36	202	287	421	505	571	636	707	798	894	-	-
261	389	526	579	633	685	754	833	928	-	-	37	219	316	438	522	589	655	728	816	921	-	-
280	429	540	594	649	703	773	854	952	-	-	38	235	345	455	539	607	674	749	839	947	-	-
299	470	554	609	665	720	792	875	976	-	-	39	252	375	472	556	625	693	770	862	974	-	-
318	511	589	624	681	738	811	896	1000	-	-	40	268	404	489	573	643	712	791	885	1000	-	-
357	525	583	639	697	755	830	916	-	-	-	41	295	421	506	590	661	732	812	908	-	-	-
395	539	598	654	713	773	849	937	-	-	-	42	322	438	523	607	679	751	833	931	-	-	-
434	553	612	669	729	790	867	958	-	-	-	43	350	455	540	624	696	770	853	954	-	-	-
472	567	626	684	745	808	886	979	-	-	-	44	377	472	557	641	714	789	874	977	-	-	-
511	581	641	699	761	825	905	1000	-	-	-	45	404	489	574	658	732	808	895	1000	-	-	-
525	595	655	714	777	843	924	-	-	-	-	46	421	506	591	675	750	827	916	-	-	-	-
539	609	669	729	793	860	943	-	-	-	-	47	438	523	608	692	768	847	937	-	-	-	-
553	623	684	745	809	878	962	-	-	-	-	48	455	540	625	710	786	866	958	-	-	-	-
567	637	698	760	825	895	981	-	-	-	-	49	472	557	642	727	804	885	979	-	-	-	-
581	651	713	775	841	913	1000	-	-	-	-	50	489	574	659	744	821	904	1000	-	-	-	-
595	665	727	790	857	930	-	-	-	-	-	51	506	591	676	761	839	923	-	-	-	-	-
609	679	741	805	872	948	-	-	-	-	-	52	523	608	693	778	857	942	-	-	-	-	-
623	693	756	820	888	965	-	-	-	-	-	53	540	625	711	795	875	962	-	-	-	-	-
637	707	770	835	904	983	-	-	-	-	-	54	557	642	728	812	893	981	-	-	-	-	-
651	721	784	850	920	1000	-	-	-	-	-	55	574	659	745	829	911	1000	-	-	-	-	-
665	735	799	865	936	-	-	-	-	-	-	56	591	676	762	846	929	-	-	-	-	-	-
679	749	813	880	952	-	-	-	-	-	-	57	608	693	779	863	946	-	-	-	-	-	-
693	762	828	895	968	-	-	-	-	-	-	58	625	711	796	880	964	-	-	-	-	-	-
707	776	842	910	984	-	-	-	-	-	-	59	642	728	813	897	982	-	-	-	-	-	-
721	790	856	925	1000	-	-	-	-	-	-	60	659	745	830	915	1000	-	-	-	-	-	-
735	804	871	940	-	-	-	-	-	-	-	61	676	762	847	932	-	-	-	-	-	-	-
749	818	885	955	-	-	-	-	-	-	-	62	693	779	864	949	-	-	-	-	-	-	-
762	832	899	970	-	-	-	-	-	-	-	63	711	796	881	966	-	-	-	-	-	-	-
776	846	914	985	-	-	-	-	-	-	-	64	728	813	898	983	-	-	-	-	-	-	-
790	860	928	1000	-	-	-	-	-	-	-	65	745	830	915	1000	-	-	-	-	-	-	-
804	874	943	-	-	-	-	-	-	-	-	66	762	847	932	-	-	-	-	-	-	-	-
818	888	957	-	-	-	-	-	-	-	-	67	779	864	949	-	-	-	-	-	-	-	-
832	902	971	-	-	-	-	-	-	-	-	68	796	881	966	-	-	-	-	-	-	-	-
846	916	986	-	-	-	-	-	-	-	-	69	813	898	983	-	-	-	-	-	-	-	-
860	930	1000	-	-	-	-	-	-	-	-	70	830	915	1000	-	-	-	-	-	-	-	-
874	944	-	-	-	-	-	-	-	-	-	71	847	932	-	-	-	-	-	-	-	-	-
888	958	-	-	-	-	-	-	-	-	-	72	864	949	-	-	-	-	-	-	-	-	-
902	972	-	-	-	-	-	-	-	-	-	73	881	966	-	-	-	-	-	-	-	-	-
916	986	-	-	-	-	-	-	-	-	-	74	898	983	-	-	-	-	-	-	-	-	-
930	1000	-	-	-	-	-	-	-	-	-	75	915	1000	-	-	-	-	-	-	-	-	-
944	-	-	-	-	-	-	-	-	-	-	76	932	-	-	-	-	-	-	-	-	-	-
958	-	-	-	-	-	-	-	-	-	-	77	949	-	-	-	-	-	-	-	-	-	-
972	-	-	-	-	-	-	-	-	-	-	78	966	-	-	-	-	-	-	-	-	-	-
986	-	-	-	-	-	-	-	-	-	-	79	983	-	-	-	-	-	-	-	-	-	-
1000	-	-	-	-	-	-	-	-	-	-	80	1000	-	-	-	-	-	-	-	-	-	-

Every effort has been made to ensure the accuracy of the above values, but accuracy is not guaranteed. In the event of a discrepancy, the insurance policy governs.

Table 4: Tenant's Package Policy

Tenant's Package Policy ($500 deductible)		
All Areas – Manitoba		
Coverage Amount	**Standard Form**	**Comprehensive Form**
$25 000	$158.00	$200.00
$30 000	$174.00	$226.00
$35 000	$199.00	$252.00
$40 000	$212.00	$269.00
$45 000	$235.00	$298.00
$50 000	$254.00	$324.00
$55 000	$272.00	$346.00
$60 000	$293.00	$373.00
$65 000	$315.00	$400.00
$70 000	$337.00	$427.00
$75 000	$359.00	$454.00
Each additional $1000	$4.50	$5.50

$200 deductible – Increase premium by 10%

Table 5: Manitoba Homeowner's Insurance Rates

Manitoba Homeowner's Insurance Rates ($500 deductible)								
Boeckh Calculator	**Metro Winnipeg**		**Area 2**		**Area 3**		**Area 4**	
Amount	**Standard**	**Comprehensive**	**Standard**	**Comprehensive**	**Standard**	**Comprehensive**	**Standard**	**Comprehensive**
$ 50 000	195	214	147	161	196	216	261	287
$ 55 000	216	238	160	176	217	239	289	318
$ 60 000	237	260	173	190	237	261	315	347
$ 65 000	252	277	187	205	255	281	339	373
$ 70 000	266	303	200	220	270	297	359	395
$ 75 000	294	314	210	231	285	314	379	417
$ 80 000	310	323	221	243	302	332	402	462
$ 85 000	318	333	226	249	313	344	416	458
$ 90 000	324	349	231	254	324	356	431	474
$ 95 000	348	370	244	268	345	380	459	505
$100 000	364	393	260	286	361	397	480	528
$105 000	390	417	278	306	378	416	503	553
$110 000	402	441	293	322	393	432	523	575
$115 000	418	464	299	329	409	450	544	598
$120 000	436	487	309	340	424	466	564	620
$125 000	451	510	319	351	444	488	591	650
$130 000	472	543	339	373	466	513	620	682
$135 000	498	557	345	380	477	525	634	697
$140 000	523	580	358	394	496	546	660	726
$145 000	538	596	375	413	508	559	676	744
$150 000	550	604	385	424	520	572	692	761
$155 000	557	613	398	438	551	606	733	806
$160 000	565	622	413	454	569	626	757	833
$165 000	572	629	425	468	589	648	783	861
$170 000	590	647	441	485	609	670	810	891
$175 000	607	668	451	496	624	686	830	913
$180 000	620	686	466	513	648	713	862	948
$185 000	636	702	478	526	667	734	887	976
$190 000	652	717	492	541	705	776	938	1032
$195 000	678	742	504	554	720	792	958	1054
$200 000	692	771	519	571	726	799	966	1063
Additional Amounts per $1000 coverage	Add: $3.15	Add: $3.50	Add: $2.75	Add: $3.03	Add: $3.55	Add: $3.91	Add: $4.72	Add: $5.19

$200 deductible – Increase premium by 10%

Table 6: Amortization Period of Mortgage Loan

Amortization Period of Mortgage Loan
(Blended payment of principal and interest per $1000 of loan)

Interest Rate	5 years	10 years	15 years	20 years	25 years
4.00%	$18.40	$10.11	$7.38	$6.04	$5.26
4.25%	18.51	10.23	7.50	6.17	5.40
4.50%	18.62	10.34	7.63	6.30	5.53
4.75%	18.74	10.46	7.75	6.44	5.67
5.00%	18.85	10.58	7.88	6.57	5.82
5.25%	18.96	10.70	8.01	6.71	5.96
5.50%	19.07	10.82	8.14	6.84	6.10
5.75%	19.19	10.94	8.27	6.98	6.25
6.00%	19.30	11.07	8.40	7.12	6.40
6.25%	19.41	11.19	8.53	7.26	6.55
6.50%	19.53	11.31	8.66	7.41	6.70
6.75%	19.64	11.43	8.80	7.55	6.85
7.00%	19.75	11.56	8.93	7.70	7.00
7.25%	19.87	11.68	9.07	7.84	7.16
7.50%	19.98	11.81	9.21	7.99	7.32
7.75%	20.10	11.94	9.34	8.13	7.47
8.00%	20.21	12.06	9.48	8.28	7.63
8.25%	20.33	12.19	9.62	8.43	7.79
8.50%	20.45	12.32	9.76	8.59	7.95
8.75%	20.56	12.45	9.90	8.74	8.12
9.00%	20.68	12.58	10.05	8.89	8.28
9.25%	20.80	12.71	10.19	9.05	8.44
9.50%	20.91	12.84	10.33	9.20	8.61
9.75%	21.03	12.97	10.48	9.36	8.78
10.00%	21.15	13.10	10.62	9.52	8.94
10.25%	21.27	13.24	10.77	9.68	9.11
10.50%	21.38	13.37	10.92	9.84	9.28
10.75%	21.50	13.50	11.06	9.99	9.45
11.00%	21.62	13.64	11.21	10.16	9.63
11.25%	21.74	13.77	11.36	10.32	9.80
11.50%	21.86	13.91	11.51	10.48	9.97
11.75%	21.98	14.04	11.66	10.65	10.14
12.00%	22.10	14.18	11.82	10.81	10.32
12.25%	22.22	14.32	11.97	10.98	10.49
12.50%	22.34	14.46	12.12	11.14	10.67
12.75%	22.46	14.59	12.28	11.31	10.85
13.00%	22.58	14.73	12.43	11.48	11.02
13.25%	22.70	14.87	12.59	11.64	11.20
13.50%	22.82	15.01	12.74	11.81	11.38
13.75%	22.94	15.15	12.90	11.98	11.56
14.00%	23.07	15.29	13.06	12.15	11.74
14.25%	23.19	15.43	13.21	12.32	11.92
14.50%	23.31	15.58	13.37	12.49	12.10
14.75%	23.43	15.72	13.53	12.67	12.28
15.00%	23.56	15.86	13.69	12.84	12.46
15.25%	23.68	16.00	13.85	13.01	12.64
15.50%	23.80	16.15	14.01	13.18	12.83
15.75%	23.92	16.29	14.17	13.36	13.01
16.00%	24.05	16.44	14.33	13.53	13.19

*** Interest compounded semi-annually. Actual payment amount may differ slightly.**

Table 7: Canadian Dollar-Based Rates

Canadian Dollar Based Rates (CAN $)			
Bank Buying Rate	**Country**	**Currency**	**Bank Selling Rate**
0.8580	Australia	Dollar (A$)	1.0244
0.0889	Austria	Schilling	0.1226
0.0318	Belgium	Franc (BF)	0.0398
0.1759	Denmark	Krone (DKr)	0.2131
2.2597	England	Pound	2.4513
1.4441	Euro	Euro	1.4870
0.2131	Finland	Mark	0.2743
0.2008	France	Franc (FF)	0.2384
0.6954	Germany	Mark	0.7845
0.003576	Greece	Drachma	0.005124
0.1643	Hong Kong	Dollar ($HK)	0.2032
0.000670	Italy	Lire	0.000821
0.01276	Japan	Yen	0.01480
0.1271	Mexico	Peso	0.1855
0.6079	Netherlands	Guilder	0.7062
0.6727	New Zealand	Dollar ($NZ)	0.8082
2.2597	N. Ireland	Pound	2.4887
0.1640	Norway	Krone (NKr)	0.1968
0.00654	Portugal	Escudo	0.00804
2.2597	Scotland	Pound	2.4958
0.7322	Singapore	Dollar (S $)	0.9792
1.6951	S. Ireland	Punt	1.9977
0.00792	Spain	Peseta	0.00957
0.1534	Sweden	Krone (SKr)	0.1843
0.8177	Switzerland	Franc (SwF)	0.9666
1.4215	United States	Dollar (US $)	1.4600

Friday, January 21, 2000

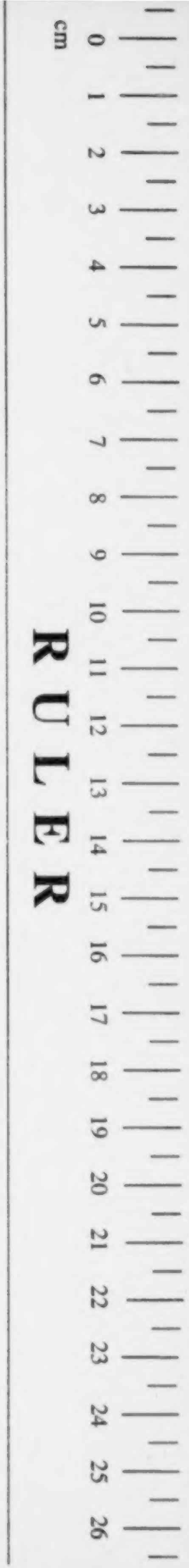
Table 8: Customs Duties and Foreign Exchange

	Group	Custom Duties	Excise Taxes
Costume Jewellery	NAFTA[1]	0%	10% > \$3.00 per item
	MFN[2]	8.5%	10% > \$3.00 per item
	GP[3]	0%	0%
Tablecloth (flax)	NAFTA	0%	0%
	MFN	10%	0%
	GP	0%	0%
Wristwatches	NAFTA	0%	10% > \$50.00 per item
	MFN	5%	10% > \$50.00 per item
	GP	4%	10% > \$50.00 per item
Precious Jewellery	NAFTA	0%	10%
	MFN	5.5%	10%
	GP	4%	10%
Foot Gear	NAFTA	0%	0%
	MFN	20%	0%
Plastic Trays	NAFTA	0%	0%
	MFN	10.5%	0%
	GP	6%	0%
Jeans	NAFTA	0%	0%
	MFN	20%	0%
	GP	None	0%
Metal Bed	NAFTA	0%	0%
	MFN	8%	0%
	GP	5%	0%
House Paint	NAFTA	0%	0%
	MFN	6.5%	0%
	GP	3%	0%
Cars	NAFTA	0%	\$100.00 for air conditioning
	MFN	6.7%	\$100.00 for air conditioning
	GP	6%	\$100.00 for air conditioning

[1] Trade agreement for "duty free" goods from U.S.A. and Mexico

[2] Most Favoured Nation includes most countries not listed under NAFTA and GP

[3] General Preferential status entitles China, India and many Latin American countries special lower rates for customs duties.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RULER

Senior 4 Consumer Mathematics (40S) Standards Test

Written Test Marking Guide

June 2003

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Education
and Youth

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Manitoba Education and Youth,
Assessment and Evaluation Branch,
Winnipeg, Manitoba R3E 3J5

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Table of Contents

Marking Guidelines ii

PERSONAL FINANCE

Question 1 (Extended Restricted Response) 1
Question 2 (Restricted Response) 4
Question 3 (Extended Restricted Response) 6

GOVERNMENT FINANCES

Question 4 (Restricted Response with Explanation) 10
Question 5 (Restricted Response) 14
Question 6 (Restricted Response) 16

STATISTICS

Question 7 (Extended Restricted Response) 18
Question 8 (Extended Restricted Response) 22
Question 9 (Open Response) 26

DESIGN AND MEASUREMENT

Question 10 (Extended Restricted Response) 28
Question 11 (Restricted Response) 32
Question 12 (Extended Restricted Response) 35
Question 13 (Restricted Response) 38

VARIATION AND FORMULAS

Question 14 (Restricted Response) 42
Question 15 (Extended Restricted Response) 45

INVESTMENTS

Question 16 (Open Response) 48
Question 17 (Open Response) 49
Question 18 (Extended Restricted Response) 51

Marking Guidelines

The marking guide for the Written Test for the Senior 4 Consumer Mathematics (40S) Standards Test is based on the outcomes and standards found in the *Senior 4 Mathematics: Outcomes and Standards* document (2001).

The marking guide is designed to assess a wide range of student performance. Specific mark allocations for each step in a given test item are provided to distinguish levels of student performance and to offer consistency in scoring student responses.

The marking guide also illustrates two types of general marking procedures related to student conceptual errors and student arithmetical errors. These recommended procedures are indicated by the following text boxes:

DEDUCTION TO TOTAL SCORE:

Deduct ½ mark for transposition of a number or minor error that follows through to the solution of a task.

MARKING CAP:

Students earn a maximum of ½ the total value of the test item for using a correct strategy with incorrect values from a table or chart or using values from an incorrect table or chart.

Marking guides are never able to fully anticipate the variety of possible student responses. The *Senior 4 Consumer Mathematics Written Test Marking Guide* provides a variety of strategies most commonly used by students during pilot testing and when solving similar mathematics-related tasks.

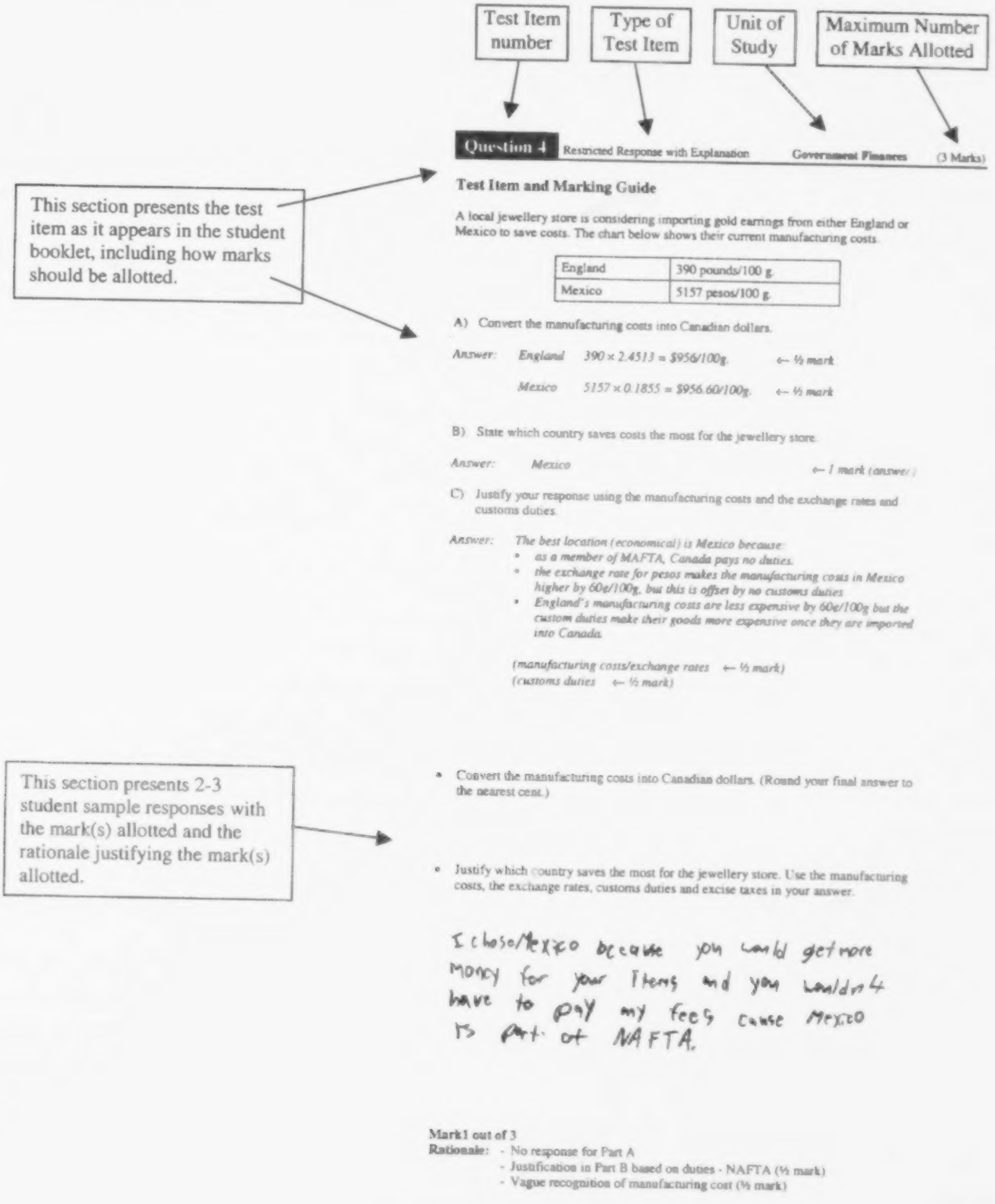
For each sample test item, a marking guide and student samples with scores and rationales are provided to help focus and clarify the marking criteria. Student responses are presented in order of increasing levels of performance.

The recommended procedure for scoring student responses is as follows:

1. Read the *Written Test Marking Guide*.
2. Study the student samples provided and the rationales for the allotted scores.
3. Determine the mark for the student's response by comparing its features with the *Written Test Marking Guide* descriptions. The descriptions and samples only typify a student's response to a given question; an exact match is not anticipated.

Presentation of the Student Samples

Each constructed-response question is presented using the following sections:



This section presents the test item as it appears in the student booklet, including how marks should be allotted.

This section presents 2-3 student sample responses with the mark(s) allotted and the rationale justifying the mark(s) allotted.

Question 4 Restricted Response with Explanation Government Finances (3 Marks)

Test Item and Marking Guide

A local jewellery store is considering importing gold earrings from either England or Mexico to save costs. The chart below shows their current manufacturing costs.

England	390 pounds/100 g.
Mexico	5157 pesos/100 g.

A) Convert the manufacturing costs into Canadian dollars.

Answer: *England* *390 × 2.4513 = $956/100g.* *← ½ mark*

Mexico *5157 × 0.1855 = $956.60/100g.* *← ½ mark*

B) State which country saves costs the most for the jewellery store.

Answer: *Mexico* *← 1 mark (answer)*

C) Justify your response using the manufacturing costs and the exchange rates and customs duties.

Answer: *The best location (economical) is Mexico because:*
- *as a member of MAFTA, Canada pays no duties.*
- *the exchange rate for pesos makes the manufacturing costs in Mexico higher by 60¢/100g, but this is offset by no customs duties*
- *England's manufacturing costs are less expensive by 60¢/100g but the custom duties make their goods more expensive once they are imported into Canada.*

(manufacturing costs/exchange rates ← ½ mark)
(customs duties ← ½ mark)

- Convert the manufacturing costs into Canadian dollars. (Round your final answer to the nearest cent.)

- Justify which country saves the most for the jewellery store. Use the manufacturing costs, the exchange rates, customs duties and excise taxes in your answer.

I chose/Mexico because you would get more Money for your Items and you wouldn't have to pay my fees cause Mexico Is part of NAFTA.

Mark1 out of 3
Rationale: - No response for Part A
- Justification in Part B based on duties - NAFTA (½ mark)
- Vague recognition of manufacturing cost (½ mark)

Question 1 Extended Restricted Response **Personal Finance** (3 Marks)

◆ Test Item and Marking Guide

Jane Smith is a 27-year-old non-smoker. She is interested in purchasing a 10-year term life insurance policy with a face value of $150 000.

A) Calculate her annual premium.

Answer:

$$\underbrace{\frac{150\,000}{1\,000}}_{\frac{1}{2}\textit{ mark}} \times \underset{\substack{\uparrow \\ \frac{1}{2}\textit{ mark}}}{0.80} \textit{ (from Table 1)} = \$120.00$$

$120.00
+$75.00 policy fee ← *½ mark*
$195.00 annual premium ← *½ mark*

B) Calculate her monthly premium.

Answer:

$$\underbrace{195.00 \times 0.09}_{\frac{1}{2}\textit{ mark}} = \underset{\substack{\uparrow \\ \frac{1}{2}\textit{ mark}}}{\$17.55} \textit{ per month}$$

MARKING CAP:

Students earn a maximum of ½ the total value of the test item for using a correct strategy with incorrect values from a table or chart or using values from an incorrect table or chart.

Question 1 Extended Restricted Response **Personal Finance** (3 Marks)

◆ **Sample 1**

Jane Smith is a 27-year-old non-smoker. She is interested in purchasing a 10-year term life insurance policy with a face value of $150 000.

A) Calculate her annual premium.

Rate 0 80 .80 × 150 =120

Annual premium is $9 126

120+75×0.52×0.09=

$\frac{9.126}{12} = .76$

B) Calculate her monthly premium.

¢

.76

Mark 1.5 out of 3

Rationale:
- Correct value from Table 1 in Part A (½ mark)
- Recognition of need to divide by 1 000 in Part A (½ mark)
- Policy fee calculated (½ mark)
- Incorrect annual premium
- Incorrect monthly premium

Question 1 Extended Restricted Response **Personal Finance** (3 Marks)

- **Sample 2**

Jane Smith is a 27-year-old non-smoker. She is interested in purchasing a 10-year term life insurance policy with a face value of $150 000.

A) Calculate her annual premium.

.80 × 150

↳ 120 + 75

↳ $195.00

B) Calculate her monthly premium.

195 × .09

↳ $17.55

Mark 3 out of 3

Rationale:
- Correct value from Table 1 in Part A (½ mark)
- Recognition of need to divide by 1 000 in Part A (½ mark)
- Policy fee calculated (½ mark)
- Correct annual premium (½ mark)
- Correct methodology to find monthly premium (½ mark)
- Correct monthly premium in Part B (½ mark)

Question 2 Restricted Response **Personal Finance** (2 Marks)

◆ Test Item and Marking Guide

Catherine Olsen rents an apartment in Thompson. Her personal possessions have a replacement value of $55 000. Catherine chooses comprehensive tenant's insurance with a $200.00 deductible. Calculate her annual insurance premium.

Answer: *$346.00 from table* ← *½ mark*
× 10% 200.00 deductible ← *½ mark*
$34.60

$346.00 + $34.60 = $380.60
½mark (under $34.60) *½mark* (under $380.60)

MARKING CAP:

Students earn a maximum of ½ the total value of the test item for using a correct strategy with incorrect values from a table or chart or using values from an incorrect table or chart.

Question 2 Restricted Response **Personal Finance** (2 Marks)

◆ Sample 1

Catherine Olsen rents an apartment in Thompson. Her personal possessions have a replacement value of $55 000. Catherine chooses comprehensive tenant's insurance with a $200.00 deductible. Calculate her annual insurance premium.

346.00
+ 220.00
$566 00 × 12 = $6792

200 × 0.10 = 20

Mark 0.5 out of 2
Rationale: - Correct value from table (½ mark)

Question 2 Restricted Response **Personal Finance** (2 Marks)

- ### Sample 2

Catherine Olsen rents an apartment in Thompson. Her personal possessions have a replacement value of $55 000. Catherine chooses comprehensive tenant's insurance with a $200.00 deductible. Calculate her annual insurance premium.

$$\begin{array}{r} \$346 \\ \times .1 \\ \hline 34.6 \end{array}$$

Mark 1.5 out of 2

Rationale:
- Correct value from table (½ mark)
- Recognition of need to multiply by 10% (½ mark)
- Correct calculation of cost for deductible (½ mark)

Question 2 Restricted Response **Personal Finance** (2 Marks)

- ### Sample 3

Catherine Olsen rents an apartment in Thompson. Her personal possessions have a replacement value of $55 000. Catherine chooses comprehensive tenant's insurance with a $200.00 deductible. Calculate her annual insurance premium.

$$\$346 \times .1 = \$34.60$$

$$\begin{array}{r} 346 \\ +34.60 \\ \hline \$380.60 \end{array}$$

Mark 2 out of 2

Rationale:
- Correct value from table (½ mark)
- Correct calculation of premium with $200 deductible (½ mark × 3)

Question 3 Extended Restricted Response **Personal Finance** (3 Marks)

♦ Test Item and Marking Guide

Robert and Lynne Dull purchase a house for $125 000. They make a down payment of $35 000 on the house and take out a fixed rate mortgage at 7.75% for the balance of the purchase price. The mortgage is amortized over 20 years.

A) Determine the Dull's monthly mortgage payment.

Answer:

$$\underbrace{(\$125\,000-\$35\,000)}_{\text{½mark}} = \$90\,000\ (\textit{mortgage})$$

$$\frac{90\,000}{\underset{\underset{\text{½mark}}{\uparrow}}{1\,000}} \times \underset{\underset{\text{½mark}}{\uparrow}}{8.13}\ (\textit{from Table 6}) = \underset{\underset{\text{½ mark}}{\uparrow}}{\$731.70}$$

B) Calculate the total amount of interest they will pay over the life of the mortgage.

Answer: $731.70 \times 12\ \textit{months} \times 20\ \textit{years} = 175\,608.00\ \textit{total payment cost}$ ←½ mark

$175\,608.00 - 90\,000.00\ \textit{principal} = \$85\,608.00\ \textit{interest}$ ←½ mark

MARKING CAP:

Students earn a maximum of ½ the total value of the test item for using a correct strategy with incorrect values from a table or chart or using values from an incorrect table or chart.

Sample 1

Robert and Lynne Dull purchase a house for $125 000. They make a down payment of $35 000 on the house and take out a fixed rate mortgage at 7.75% for the balance of the purchase price. The mortgage is amortized over 20 years.

A) Determine the Dull's monthly mortgage payment.

125000 - 35000 = 90000

90 000 × 8.13 = 73 170

73170 ÷ 12 = $\boxed{\$6097.50}$

B) Calculate the total amount of interest they will pay over the life of the mortgage.

6097.50 × 12 × 20 =

$\boxed{\$1463\ 400}$

Mark 1 out of 3
Rationale: - Accurate subtraction of down payment (½ mark)
- Correct value from Table 6 (½ mark)

◆ Sample 2

Robert and Lynne Dull purchase a house for $125 000. They make a down payment of $35 000 on the house and take out a fixed rate mortgage at 7.75% for the balance of the purchase price. The mortgage is amortized over 20 years.

A) Determine the Dull's monthly mortgage payment.

8.13

$125 - 35 = 90$

$90 \times 8.13 = \boxed{\$731.70}$

B) Calculate the total amount of interest they will pay over the life of the mortgage.

$731.70 \times 20 = \boxed{\$14634}$

Mark 2 out of 3

Rationale:
- Accurate subtraction of down payment (½ mark)
- Correct value from Table 6 (½ mark)
- Recognition of division by 1 000 (½ mark)
- Correct solution to Part A (½ mark)

◆ Sample 3

Robert and Lynne Dull purchase a house for $125 000. They make a down payment of $35 000 on the house and take out a fixed rate mortgage at 7.75% for the balance of the purchase price. The mortgage is amortized over 20 years.

A) Determine the Dull's monthly mortgage payment.

125000 - 35000 = 90 000

8.13 × 90 = 731.70

B) Calculate the total amount of interest they will pay over the life of the mortgage.

731.7 × 12 = $8780.4 × 20

$ 175 608.00

- 90 000.00

$ 85608.00

Mark 3 out of 3

Rationale:
- Accurate subtraction of down payment (½ mark)
- Correct value from Table 6 (½ mark)
- Recognition of division by 1 000 (½ mark)
- Correct solution to Part A (½ mark)
- Correct calculation of total payment (½ mark)
- Correct solution to Part B (½ mark)

Question 4 Restricted Response with Explanation **Government Finances** (3 Marks)

◆ Test Item and Marking Guide

A local jewellery store is considering importing gold earrings from either England or Mexico to save costs. The chart below shows their current manufacturing costs.

England	390 pounds/100 g.
Mexico	5157 pesos/100 g.

A) Convert the manufacturing costs into Canadian dollars. (Round your final answer to the nearest cent.)

Answer:

$$\text{England: } 390 \times \underset{\substack{\uparrow \\ \frac{1}{2}\text{ mark}}}{2.4513}(\text{from Table 8}) = \$956.01/100\text{g} \qquad \leftarrow \tfrac{1}{2}\text{ mark}$$

$$\text{Mexico: } 5157 \times \underset{\substack{\uparrow \\ \frac{1}{2}\text{ mark}}}{0.1855}(\text{from Table 8}) = \$956.62/100\text{g} \qquad \leftarrow \tfrac{1}{2}\text{ mark}$$

B) Justify which country saves the most for the jewellery store. Use the manufacturing costs, the exchange rates, customs duties and excise taxes in your answer.

Answer: *The best location (economical) is Mexico because:*

- *as a member of NAFTA, Canada pays no duties.*
- *the exchange rate for pesos makes the manufacturing costs in Mexico higher by 60¢/100g, but this is offset by no customs duties*
- *England's manufacturing costs are less expensive by 60¢/100g but the custom duties make their goods more expensive once they are imported into Canada.*

(manufacturing costs/exchange rates ← ½ mark)
(customs duties/excise taxes ← ½ mark)

MARKING CAP:

Students earn a maximum of ½ the total value of the test item for using a correct strategy with incorrect values from a table or chart or using values from an incorrect table or chart.

Question 4 Restricted Response with Explanation **Government Finances** (3 Marks)

◆ Sample 1

A local jewellery store is considering importing gold earrings from either England or Mexico to save costs. The chart below shows their current manufacturing costs.

England	390 pounds/100 g.
Mexico	5157 pesos/100 g.

A) Convert the manufacturing costs into Canadian dollars. (Round your final answer to the nearest cent.)

390 pounds → CND = $881.28~~3~~

5157 pesos → CND = $655.45

B) Justify which country saves the most for the jewellery store. Use the manufacturing costs, the exchange rates, customs duties and excise taxes in your answer.

England Custom Duties = 5.5%
Excise taxes = 10%

custom 881.28 × .055 = $48.47   881.28 - 48.47 - 88.13 = $\boxed{744.68}$

E 881.28 × .1 = $88.13

Mexico Custom Duties : 0%
Excise taxes = 10%

custom 655.45 × 0 = 0

Excise 655.45 × .1 = $65.55. $655.45 - $65.55 = $\boxed{\$589.90}$

England is still better.

Mark 1.5 out of 3

Rationale:
- Incorrect values from Table 8 in Part A (marking cap)
- Recognition of no custom duties for Mexico (½ mark)
- Excise duties calculated (½ mark)

MARKING CAP:

Students earn a maximum of ½ the total value of the test item for using a correct strategy with incorrect values from a table or chart or using values from an incorrect table or chart.

Question 4 Restricted Response with Explanation **Government Finances** (3 Marks)

- **Sample 2**

A local jewellery store is considering importing gold earrings from either England or Mexico to save costs. The chart below shows their current manufacturing costs.

England	390 pounds/100 g.
Mexico	5157 pesos/100 g.

A) Convert the manufacturing costs into Canadian dollars. (Round your final answer to the nearest cent.)

B) Justify which country saves the most for the jewellery store. Use the manufacturing costs, the exchange rates, customs duties and excise taxes in your answer.

I chose Mexico because you would get more money for your Items and you wouldn't have to pay any fees cause Mexico is part of NAFTA.

Mark1 out of 3

Rationale:
- No response for Part A
- Justification in Part B based on duties - NAFTA (½ mark)
- Vague recognition of manufacturing cost (½ mark)

Question 4 Restricted Response with Explanation **Government Finances** (3 Marks)

◆ **Sample 3**

A local jewellery store is considering importing gold earrings from either England or Mexico to save costs. The chart below shows their current manufacturing costs.

England	390 pounds/100 g.	-2.4513
Mexico	5157 pesos/100 g.	-0.1855

A) Convert the manufacturing costs into Canadian dollars. (Round your final answer to the nearest cent.)

2.4513 x 390 = 956.00
0.1855 x 5157 = 956.62
956.62 x.10 = 95.66

956 x .055 = 52.58
956 x.10 = 95.60

B) Justify which country saves the most for the jewellery store. Use the manufacturing costs, the exchange rates, customs duties and excise taxes in your answer.

Mexico is the best because, even though it's
higher after the exchange, Mexico doesn't
have custom duties so you are saving by going
with Mexico because England you will pay duties
and excise taxes but with Mexico you only pay
excise taxes.

Mark 3 out of 3

Rationale:
- Correct value from Table 8 for England (½ mark)
- Rounded manufacturing costs for England (½ mark)
- Correct value from Table 8 for Mexico (½ mark)
- Manufacturing costs for Mexico (½ mark)
- Justification based on duties and taxes (½ mark)
- Recognition of exchange rates (½ mark)

Question 5 Restricted Response **Government Finances** (2 Marks)

◆ **Test Item and Marking Guide** **V-E5**

Hyatt purchases 40 litres of gasoline at a price of 66.5 cents/litre.

A) Calculate the total cost of Hyatt's gas purchase.

Answer:

$$\underset{\substack{\uparrow \\ \frac{1}{2}\text{ mark}}}{0.665} \times 40 = \underset{\substack{\uparrow \\ \frac{1}{2}\text{ mark}}}{\$26.60}$$

B) Calculate the amount of the total purchase that is gasoline tax.

Answer:

$$\underset{\substack{\uparrow \\ \frac{1}{2}\text{ mark}}}{0.115} \times 40 = \underset{\substack{\uparrow \\ \frac{1}{2}\text{ mark}}}{\$4.60}$$

Question 5 Restricted Response **Government Finances** (2 Marks)

◆ **Sample 1**

Hyatt purchases 40 litres of gasoline at a price of 66.5 cents/litre.

A) Calculate the total cost of Hyatt's gas purchase.

40x.665= $26.60

B) Calculate the amount of the total purchase that is gasoline tax.

$26.60x.115=$3.06

Mark 1.5 out of 2

Rationale:
- Accurate calculation in Part A (½ mark × 2)
- Calculation in Part B based on total cost of purchase
- Correct substitution in Part B (½ mark)

Question 5 Restricted Response **Government Finances** (2 Marks)

- **Sample 2**

Hyatt purchases 40 litres of gasoline at a price of 66.5 cents/litre.

A) Calculate the total cost of Hyatt's gas purchase.

66.5
× 40.0
000
000
2660
$ 26600

$26.60
+ 4.60
31.20

40.0
× 11.5
2000
400
400
$4600

$31.20 TOTAL COST.

B) Calculate the amount of the total purchase that is gasoline tax.

$4.60 IS TOTAL TAX.

11.5¢ A LITRE

Mark 1 out of 2
Rationale:
- Gasoline tax is added to total cost of gas purchase in calculation of Part A
- Concept of gasoline tax included in cost of gas purchase not evident in Part A
- Accurate calculation in Part B (½ mark × 2)

Question 5 Restricted Response **Government Finances** (2 Marks)

- **Sample 3**

Hyatt purchases 40 litres of gasoline at a price of 66.5 cents/litre.

A) Calculate the total cost of Hyatt's gas purchase.

40L × 66.5¢ = $26.60

B) Calculate the amount of the total purchase that is gasoline tax.

40L × 11.5 = $4.60 Tax

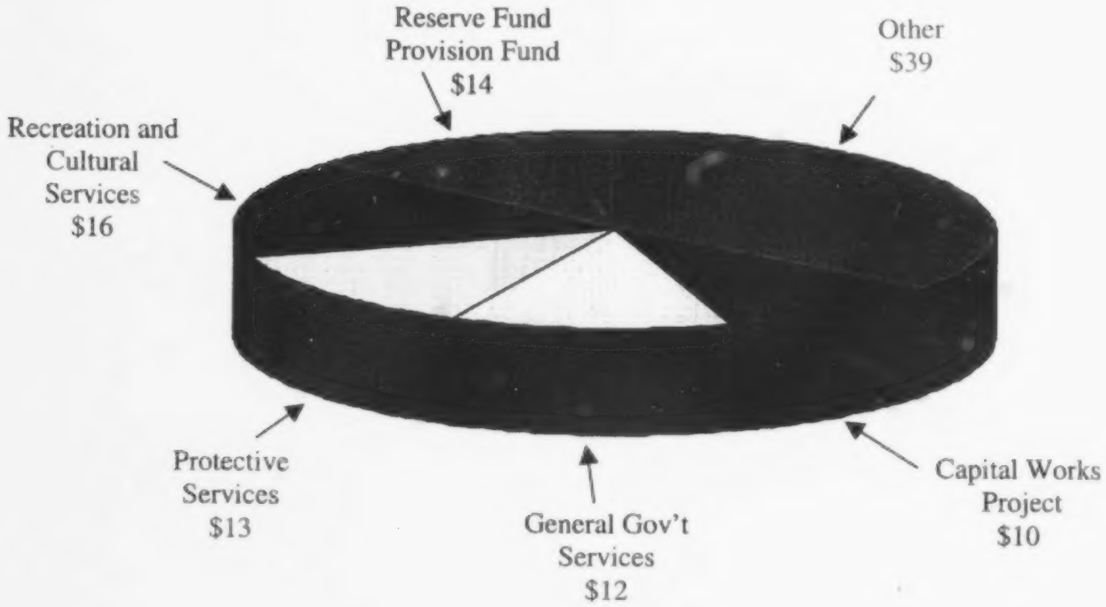
Mark 2 out of 2
Rationale:
- Accurate calculation in Part A (1 mark)
- Accurate calculation in Part B (1 mark)

Question 6 Restricted Response **Government Finances** (2 Marks)

- **Test Item and Marking Guide**

Calculate the percentage of the major municipal expenditures allocated to protective services for the city of Swindon using the pie chart below.

Major Municipal Expenditures (in millions)



Answer:

$$\frac{\overset{\overset{\frac{1}{2}\text{ mark}}{\downarrow}}{\$13\text{ million}}}{\underset{\underset{\frac{1}{2}\text{mark}}{\uparrow}}{\$104\text{ million}}} \times \underset{\underset{\frac{1}{2}\text{mark}}{\uparrow}}{100} = \underset{\underset{\frac{1}{2}\text{mark}}{\uparrow}}{12.5\%}$$

Note:
Test Item has been revised after piloting. Student samples reflect the pilot item.

Question 6 Restricted Response **Government Finances** (2 Marks)

- ### Sample 1

Calculate the percentage of the major municipal expenditures allocated to protective services for the city of Swindon using the pie chart below.

10
12
13
16
14
65

$65/13 = 5\%$

Mark 1 out of 2

Rationale:
- Correct values to find $65 million (½ mark)
- Correct value for protective services (½ mark)
- Ineffective strategy to solve problem
- Incorrect solution

Question 6 Restricted Response **Government Finances** (2 Marks)

- ### Sample 2

Calculate the percentage of the major municipal expenditures allocated to protective services for the city of Swindon using the pie chart below.

16 + 14 + 13 + 12 + 10 = $65 million

13 ÷ 65 = 0.2 × 100 = 20%

20% for municipal expenditures was allocated to protective services

Mark 2 out of 2

Rationale:
- Correct values to find $65 million (½ mark)
- Correct value for protective services (½ mark)
- Effective strategy to solve problem (½ mark)
- Correct solution (½ mark)

Question 7 Extended Restricted Response **Statistics** (3 Marks)

◆ Test Item and Marking Guide

The chart below shows the points scored by Jim Malone in 11 basketball games.

A) Complete the standard deviation table.

Game	Points (x)	Difference from Mean ($x-\bar{x}$)	Square of Difference $(x-\bar{x})^2$
1	12	-16	256
2	41	13	169
3	16	-12	144
4	22	-6	36
5	40	12	144
6	34	6	36
7	21	-7	49
8	30	2	4
9	35	7	49
10	29	1	1
11	28	0	0
TOTAL	Sum 308		Sum 888

↑ *½ mark for sum*

↑ *½ mark for sum*

B) Find the standard deviation for Jim's basketball points, using the table above. (Round your final answer to 1 decimal place.)

Answer: $\bar{x} = 28 \leftarrow \frac{1}{2}$ *mark*

$$S = \overbrace{\sqrt{\frac{\Sigma(x-\bar{x})^2}{n-1}}}^{\frac{1}{2}\text{ mark}}\ \overbrace{\sqrt{\frac{888}{10}}}^{\frac{1}{2}\text{ mark}} = 9.42 \text{ or } 9.4 \quad \leftarrow \frac{1}{2}\text{ mark}$$

OR

Note : Students may use "n" or "n − 1"

$$S = \overbrace{\sqrt{\frac{\Sigma(x-\bar{x})^2}{n}}}^{\frac{1}{2}\text{ mark}}\ \overbrace{\sqrt{\frac{888}{11}}}^{\frac{1}{2}\text{ mark}} = 8.98 \text{ or } 9 \quad \leftarrow \frac{1}{2}\text{ mark}$$

Question 7 Extended Restricted Response **Statistics** (3 Marks)

Note: Test Item has been revised after piloting. Student samples reflect the pilot item.

◆ Sample 1

The chart below shows the points scored by Jim Malone in 11 basketball games.

A) Complete the standard deviation table. Mean 28

Game	Points (x)	Difference from Mean ($x-\overline{x}$)	Square of Difference $(x-\overline{x})^2$
1	12	-16	256
2	16	-12	144
3	40	+12	144
4	21	-7	49
5	35	+7	49
6	28	0	0
7	41	+13	169
8	22	-6	36
9	34	+6	36
10	30	+2	4
11	29	+1	2
TOTAL	Sum		Sum 889

$$s = 889\frac{(28-28)^2}{11-1}$$

B) Find the standard deviation for Jim's basketball points, using the table above. (Round your final answer to 1 decimal place.)

$$s = 889\frac{(28-28)^2}{11-1}$$

Mark 1 out of 3

Rationale:
- Accurate calculation of the mean [28] (½ mark)
- No sum of the points
- Incorrect calculation of the sum of square of the difference
- Initial step to finding standard deviation (½ mark)
- No solution

Question 7 Extended Restricted Response **Statistics** (3 Marks)

Note: Test Item has been revised after piloting. Student samples reflect the pilot item.

◆ Sample 2

The chart below shows the points scored by Jim Malone in 11 basketball games.

A) Complete the standard deviation table. 28

Game	Points (x)	Difference from Mean $(x-\bar{x})$	Square of Difference $(x-\bar{x})^2$
1	12	−16	256
2	16	−12	144
3	40	12	144
4	21	−7	49
5	35	7	49
6	28	0	0
7	41	13	169
8	22	−6	36
9	34	6	36
10	30	2	4
11	29	1	1
TOTAL	Sum		Sum

B) Find the standard deviation for Jim's basketball points, using the table above. (Round your final answer to 1 decimal place.)

$$\sqrt{\frac{\Sigma(888)}{\underset{(10)}{n-1}}} \quad \text{or} \quad \sqrt{\frac{\Sigma(5625)}{\underset{(10)}{n-1}}}$$

S.D = 1

Mark 2 out of 3

Rationale:
- Accurate calculation of the mean [28] (½ mark)
- Correct calculation of sum of square of the difference [888] (½ mark)
- Initial step to finding standard deviation (½ mark)
- Correct substitution into formula (½ mark)
- No solution

Question 7 Extended Restricted Response **Statistics** (3 Marks)

Note: Test Item has been revised after piloting. Student samples reflect the pilot item.

◆ Sample 3

The chart below shows the points scored by Jim Malone in 11 basketball games.

A) Complete the standard deviation table.

Game	Points (x)	Difference from Mean $(x-\bar{x})$	Square of Difference $(x-\bar{x})^2$
1	12	16	256
2	16	12	144
3	40	12	144
4	21	7	49
5	35	7	49
6	28	0	0
7	41	13	169
8	22	6	36
9	34	6	36
10	30	2	4
11	29	1	1
TOTAL	Sum		Sum

MEAN = 28

B) Find the standard deviation for Jim's basketball points, using the table above. (Round your final answer to 1 decimal place.)

MEAN OF SQUARE DIFF = 888/11 = 80.73
SD = 8.98

Mark 2.5 out of 3
Rationale:
- Accurate calculation of mean (½ mark)
- Accurate calculation of sum of the square of the difference [888] (½ mark)
- Effective strategy to find standard deviation [substitution and calculation] (½ mark × 2)
- No sum of the points
- Accurate solution

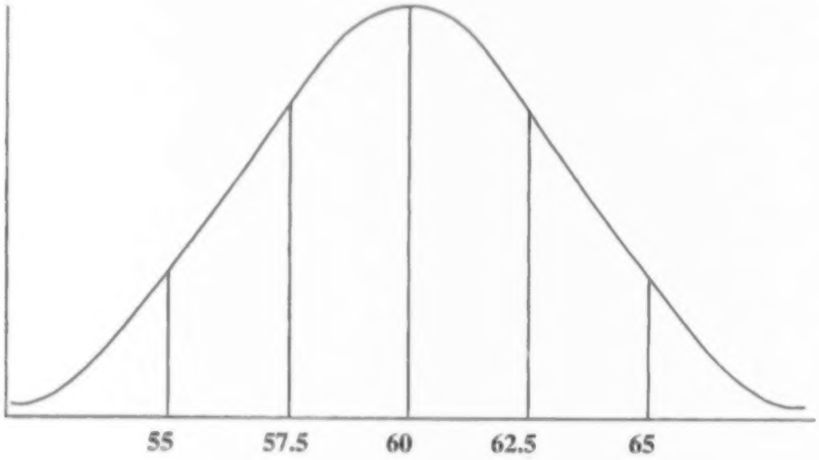
Question 8 Extended Restricted Response **Statistics** (2 Marks)

- **Test Item and Marking Guide**

The mean number of chocolate-coated candy per bag is 60 candies. The standard deviation for the number of candies is 2.5. Assuming that the distribution follows a normal curve, answer the following questions:

A) Identify the missing values from the distribution curve.

Answer:



← *½ mark*

B) Find the percent of bags of candies that you would expect to have 65 or more candies in them.

Answer: 2% ← *½ mark*

C) Determine how many bags of candy per case would likely have fewer than 57.5 candies in them. The chocolate-coated candies are shipped in cases of 200 bags each.

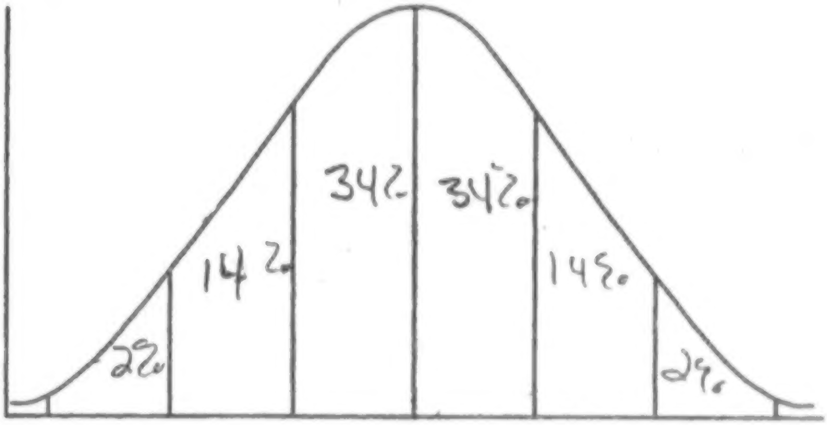
Answer: $\underbrace{200\times.16}_{\frac{1}{2}\text{mark}} = \underset{\underset{\frac{1}{2}\text{mark}}{\uparrow}}{32}\text{ bags}$ ← *1 mark*

Question 8 Extended Restricted Response **Statistics** (2 Marks)

- **Sample 1**

The mean number of chocolate-coated candy per bag is 60 candies. The standard deviation for the number of candies is 2.5. Assuming that the distribution follows a normal curve, answer the following questions:

A) Identify the missing values from the distribution curve.



B) Find the percent of bags of candies that you would expect to have 65 or more candies in them.

34%

C) Determine how many bags of candy per case would likely have fewer than 57.5 candies in them. The chocolate-coated candies are shipped in cases of 200 bags each.

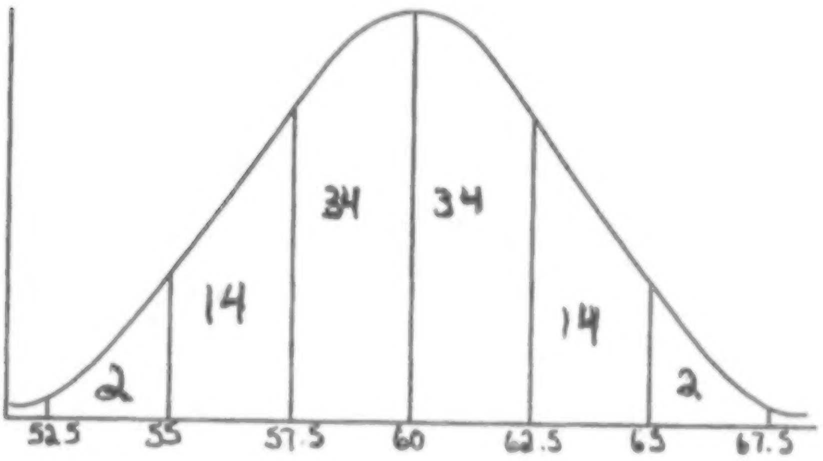
Mark 0 out of 2

Rationale: - No labels on curve
- Incorrect solution for Part B
- No attempt for Part C

◆ Sample 2

The mean number of chocolate-coated candy per bag is 60 candies. The standard deviation for the number of candies is 2.5. Assuming that the distribution follows a normal curve, answer the following questions:

A) Identify the missing values from the distribution curve.



B) Find the percent of bags of candies that you would expect to have 65 or more candies in them.

2%

C) Determine how many bags of candy per case would likely have fewer than 57.5 candies in them. The chocolate-coated candies are shipped in cases of 200 bags each.

5 bags

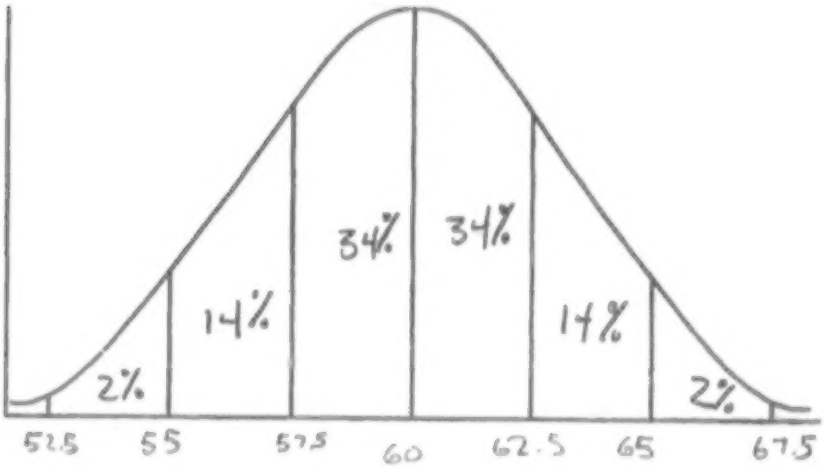
Mark 1 out of 2

Rationale:
- Accurate labelling of curve (½ mark)
- Correct solution for Part B (½ mark)
- No strategy shown for Part C
- Incorrect solution for Part C

- ## Sample 3

The mean number of chocolate-coated candy per bag is 60 candies. The standard deviation for the number of candies is 2.5. Assuming that the distribution follows a normal curve, answer the following questions:

A) Identify the missing values from the distribution curve.



B) Find the percent of bags of candies that you would expect to have 65 or more candies in them.

2% would have 65 or more

C) Determine how many bags of candy per case would likely have fewer than 57.5 candies in them. The chocolate-coated candies are shipped in cases of 200 bags each.

16% × 200 = 32

32 bags would likely have fewer than 57.5 candies

Mark 2 out of 2

Rationale:
- Accurate labelling of curve (½ mark)
- Correct solution for Part B (½ mark)
- Effective strategy to solve Part C (½ mark)
- Correct solution for Part C (½ mark)

Question 9 Open Response **Statistics** (1 Mark)

- **Test Item and Marking Guide**

An article in the college paper states that the cut off for general entrance is the 62nd percentile. Jane has a 70% Senior 4 average. She did not get into the college.
Explain how Jane's 70 percent is different from the 62nd percentile.

Answer: Percentiles (rank order) and percentages (actual score for person)
Many students who applied had a higher average than Jane. ←*1 mark*

Question 9 Open Response **Statistics** (1 Mark)

- **Sample 1**

An article in the college paper states that the cut off for general entrance is the 62nd percentile. Jane has a 70% Senior 4 average. She did not get into the college.
Explain how Jane's 70 percent is different from the 62nd percentile.

Jane's 70 percent is better then 62nd because
62nd scored lower then her so she
rather be keeping her 70%.

Mark 0 out of 1
Rationale: - Concept of ranking not evident

◆ **Sample 2**

An article in the college paper states that the cut off for general entrance is the 62nd percentile. Jane has a 70% Senior 4 average. She did not get into the college.
Explain how Jane's 70 percent is different from the 62nd percentile.

Janes 70% sounds good but you
don't Know How she did Compared
to the rest of the kids applying to
the College it's just not enough information
to know exctly how she did.

Mark 1 out of 1
Rationale: - Concept of comparative percentages evident

◆ **Sample 3**

An article in the college paper states that the cut off for general entrance is the 62nd percentile. Jane has a 70% Senior 4 average. She did not get into the college.
Explain how Jane's 70 percent is different from the 62nd percentile.

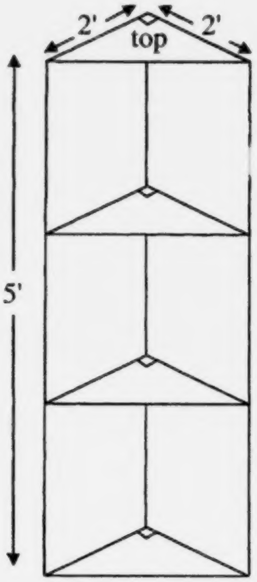
The perCent is what she scored out of a 100
the perCentile is what she got compared to
the rest of the class.

Mark 1 out of 1
Rationale: - Difference between rank and actual score evident

◆ Test Item and Marking Guide

Marie is planning to build a corner-shelving unit. Each of the two sides measure 2' × 5'. The unit has four triangular-shaped shelves (see drawing).

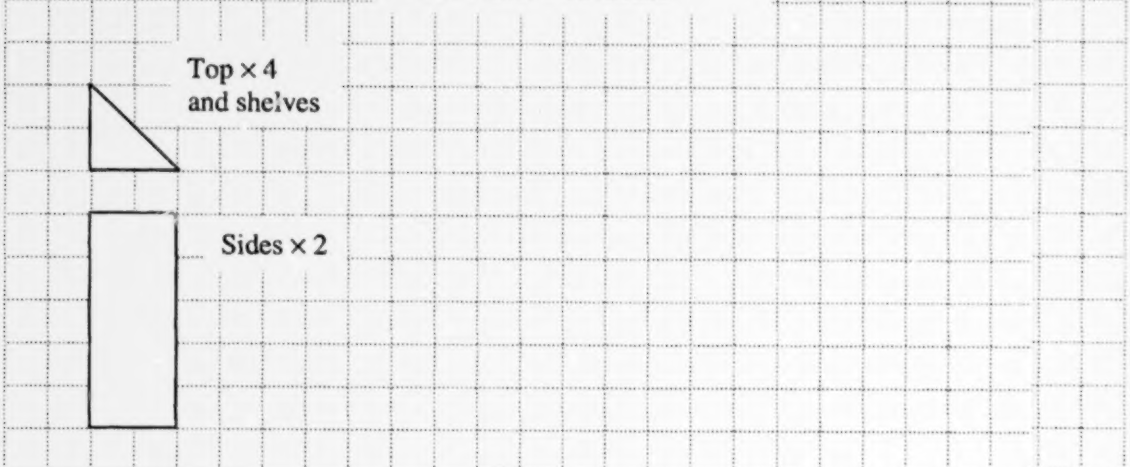
Draw the constituent parts on the given graph paper using a scale of 1:12.



appropriate scale	*← 1 mark*
all constituent parts	*← 1 mark*

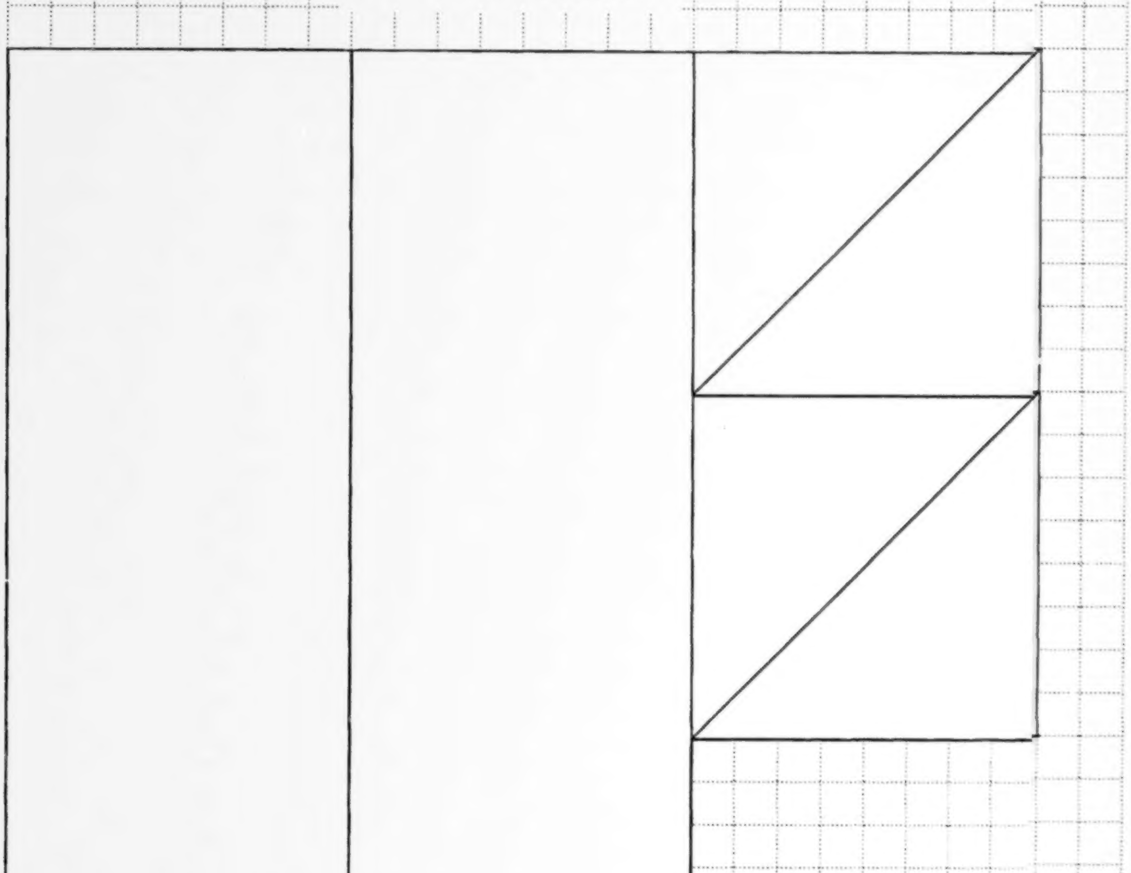
(continued on next page)

Scale: 1 unit = 12 inches



or

Scale: 1 inch = 12 inches

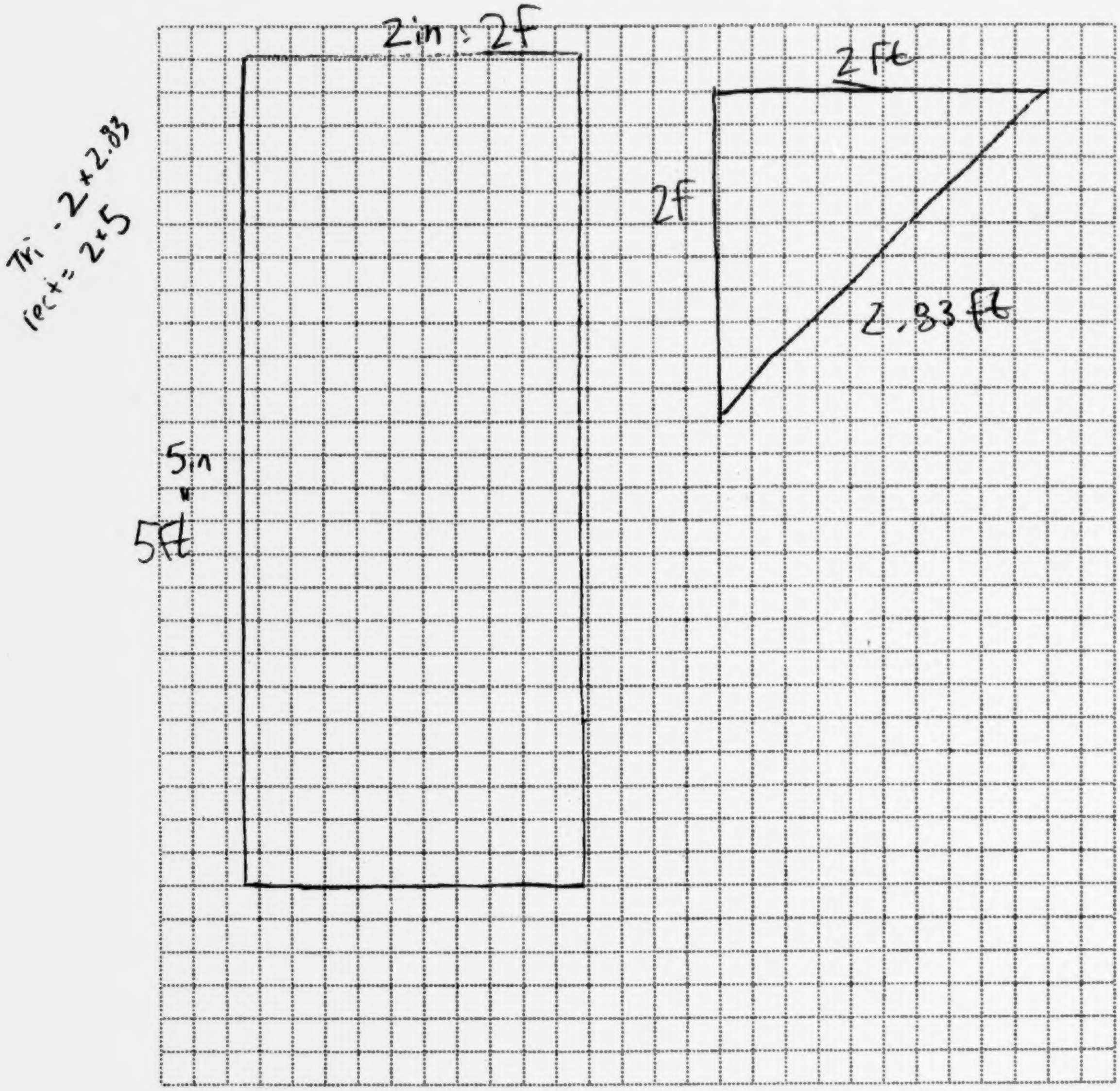


Question 10 Extended Restricted Response **Design and Measurement** (2 Marks)

◆ Sample 1

Marie is planning to build a corner-shelving unit. Each of the two sides measure 2' × 5'. The unit has four triangular-shaped shelves (see drawing).

Draw the constituent parts on the given graph paper using a scale of 1:12.



Mark 1 out of 2

Rationale: - Appropriate scale (1 mark)
- Incorrect number of constituent parts

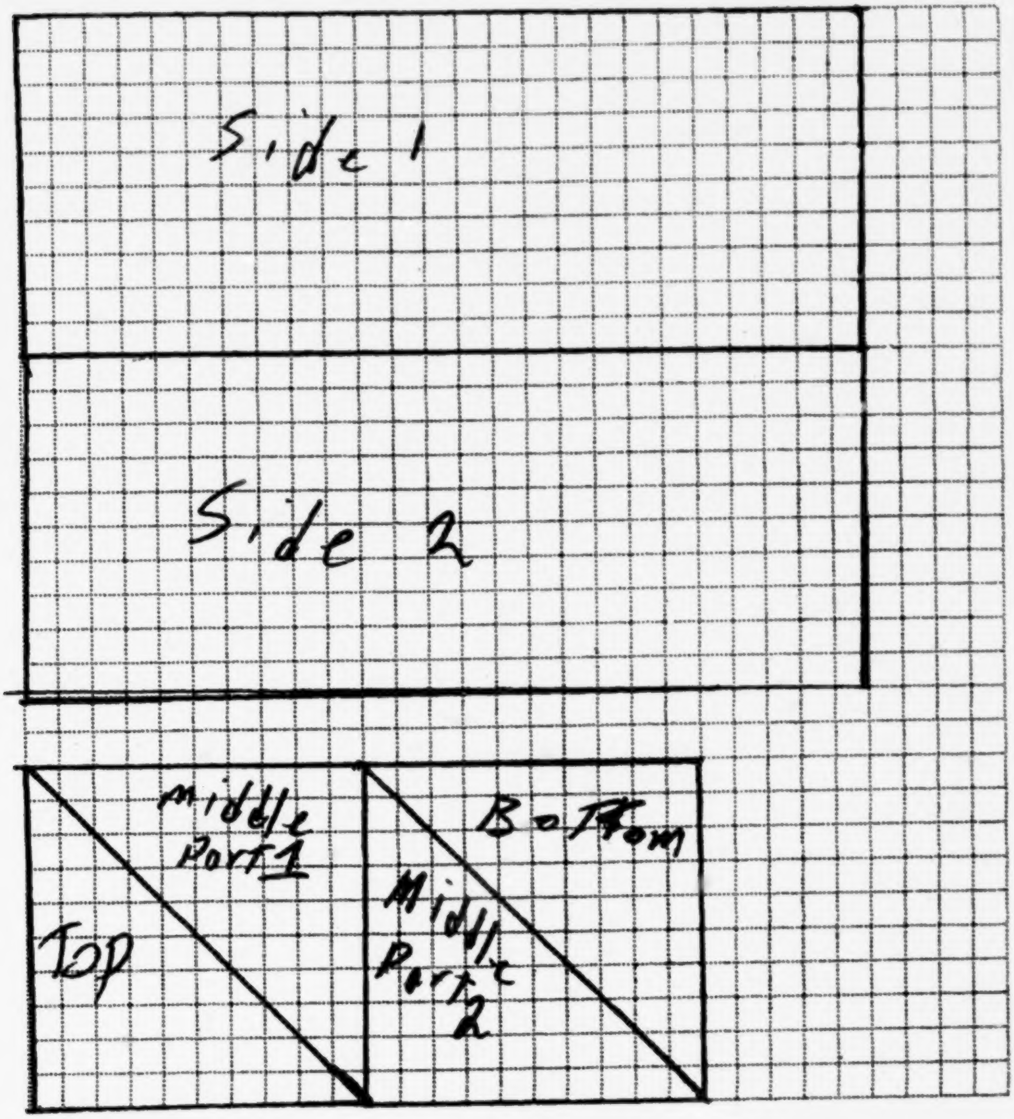
Question 10 Extended Restricted Response **Design and Measurement** (2 Marks)

◆ Sample 2

Marie is planning to build a corner-shelving unit. Each of the two sides measure 2' × 5'. The unit has four triangular-shaped shelves (see drawing).

Draw the constituent parts on the given graph paper using a scale of 1:12.

1in = 12in



Mark 2 out of 2
Rationale: - Appropriate scale (1 mark)
- Correct number of constituent parts (1 mark)

Question 11 Restricted Response **Design and Measurement** (2 Marks)

- ### Test Item and Marking Guide

Draw an oblique projection of a rectangular slab of fudge with the given measurements:

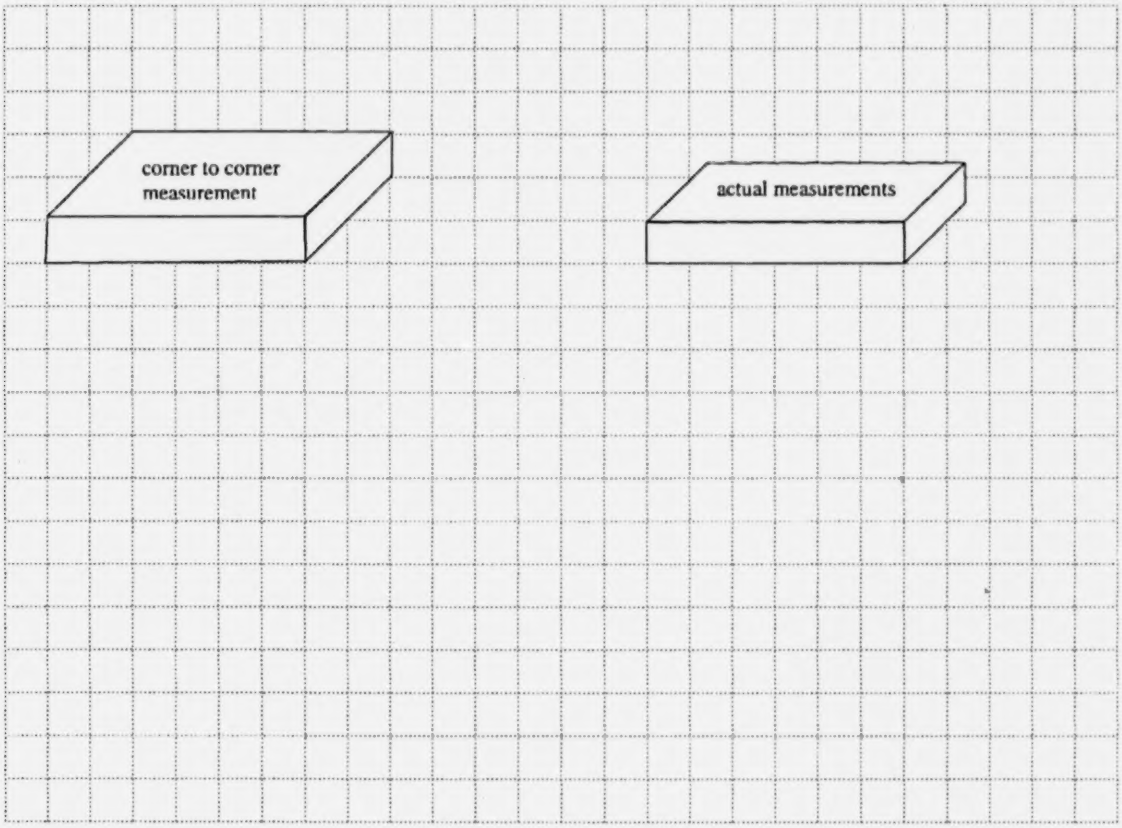
length: 6 inches width: 4 inches height: 1 inch

Use the ¼ inch graph paper provided.
Include an appropriate scale.

Answer:

(Sample)
each unit = 1 inch

(Sample)
¼ inch = 1 inch



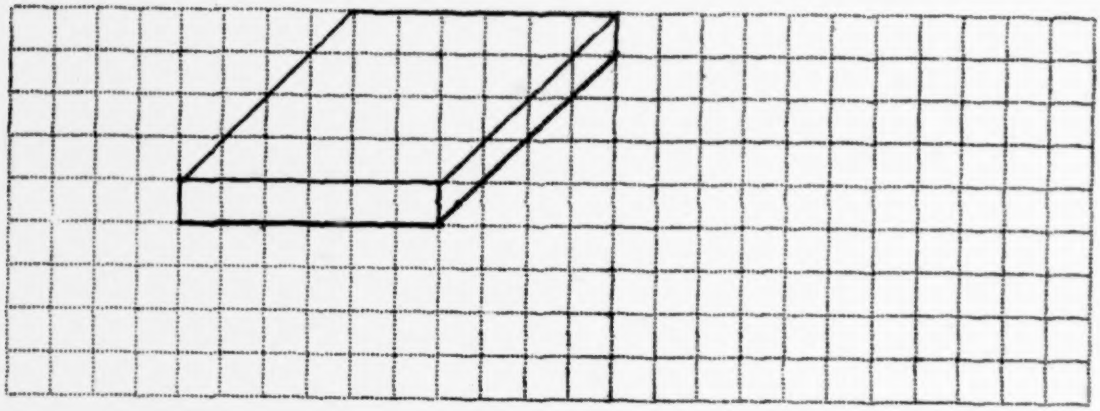
correct scale ← *1 mark*
correct drawing and dimensions ← *1 mark*

- **Sample 1**

Draw an oblique projection of a rectangular slab of fudge with the given measurements:

length: 6 inches width: 4 inches height: 1 inch

Use the ¼ inch graph paper provided.
Include an appropriate scale.



Mark 1 out of 2
Rationale: - Correct scale (1 mark)
- Incorrect oblique

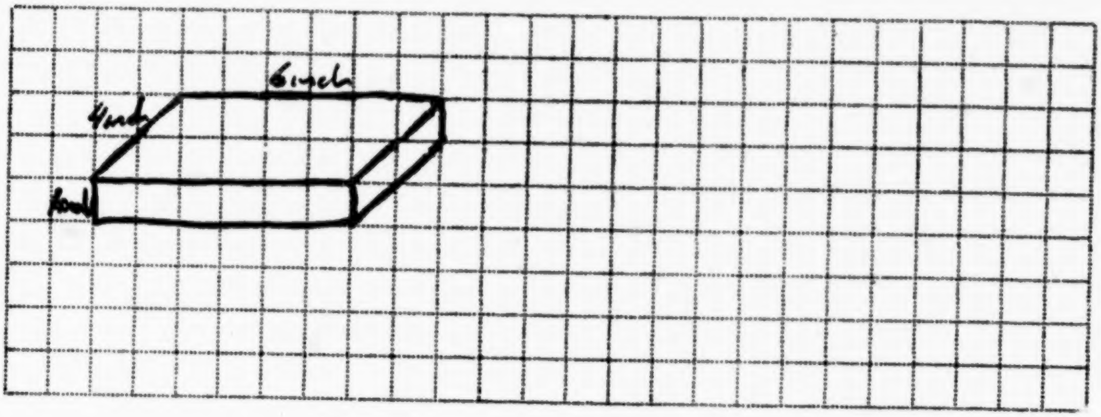
Question 11 Restricted Response **Design and Measurement** (2 Marks)

- **Sample 2**

Draw an oblique projection of a rectangular slab of fudge with the given measurements:

length: 6 inches　　width: 4 inches　　height: 1 inch

Use the ¼ inch graph paper provided.
Include an appropriate scale.



Mark 2 out of 2
Rationale: - Correct scale (1 mark)
- Correct drawing and dimensions (1 mark)

Question 12 Extended Restricted Response **Design and Measurement** (2 Marks)

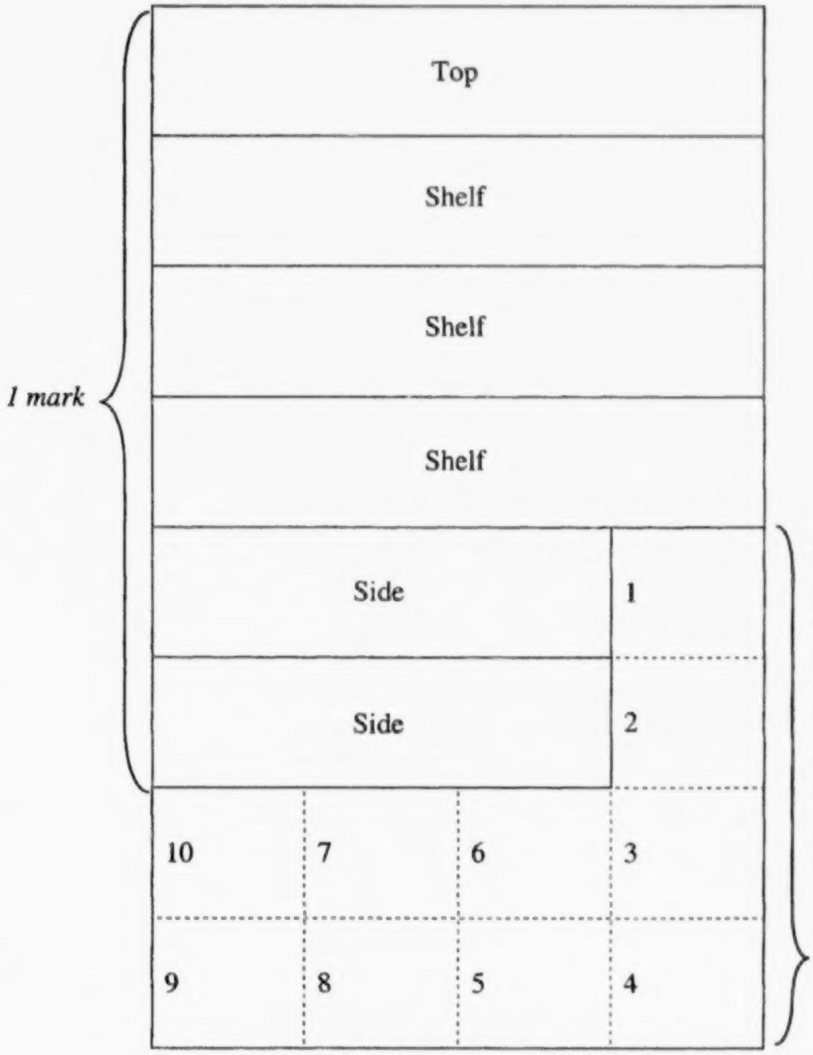
♦ Test Item and Marking Guide

Bill wishes to build an open-backed bookshelf. The three shelves and the top each measure 1' × 4' and the two sides each measure 1' × 3'. The pieces are cut from a single sheet of 4' × 8' plywood.

State how many square feet of plywood would be unused.

Answer: (diagram method)

Template for 4' × 8' sheet of plywood



Answer: (calculation method)

$4(1 \times 4) = 16$

$2(1 \times 3) = 6$

Total area used:

$16 + 6 = 22$ *sq. ft.* ← *1 mark*

Total area:

$4 \times 8 = 32$ *sq. ft.*

Total unused area:

$32 - 22 = 10$ *sq. ft.* ← *1 mark*

OR

←*1 mark*

10 square feet unused

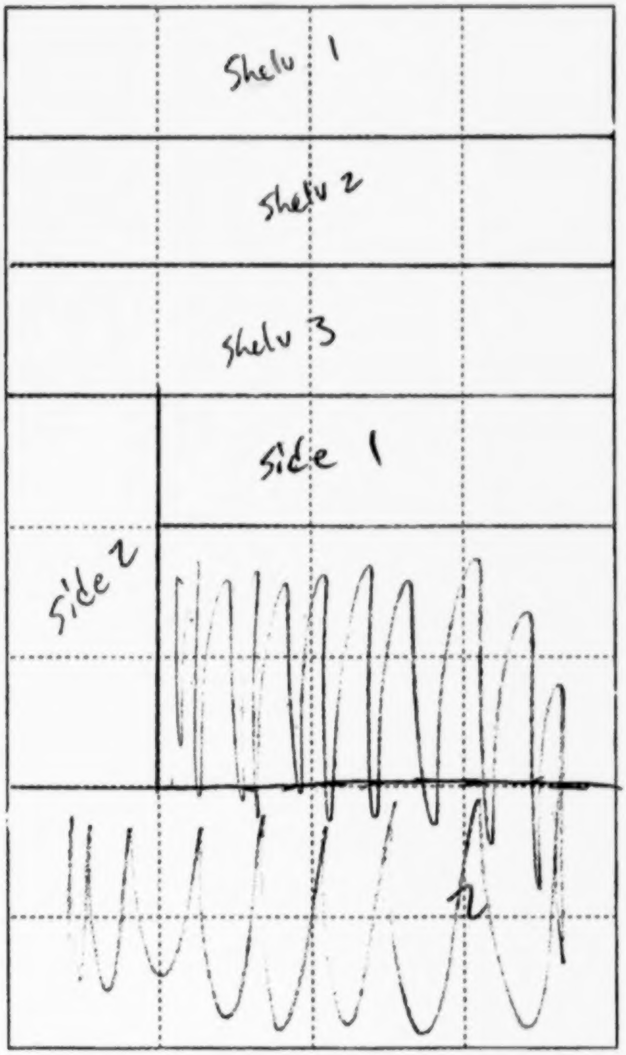
clear process and calculations and/or a drawing to calculate amount used ← *1 mark*
clear process and calculations to calculate amount unused ← *1 mark*

Question 12 Extended Restricted Response **Design and Measurement** (2 Marks)

◆ Sample 1

Bill wishes to build an open-backed bookshelf. The three shelves and the top each measure 1' × 4' and the two sides each measure 1' × 3'. The pieces are cut from a single sheet of 4' × 8' plywood.

State how many square feet of plywood would be unused.



$a_1 = l \times w$

$= 2 \times 3$

$= 6'^2$

$a^2 = 2 \times 4$

$= 8'^2$

$Tot_a = 14'^2$

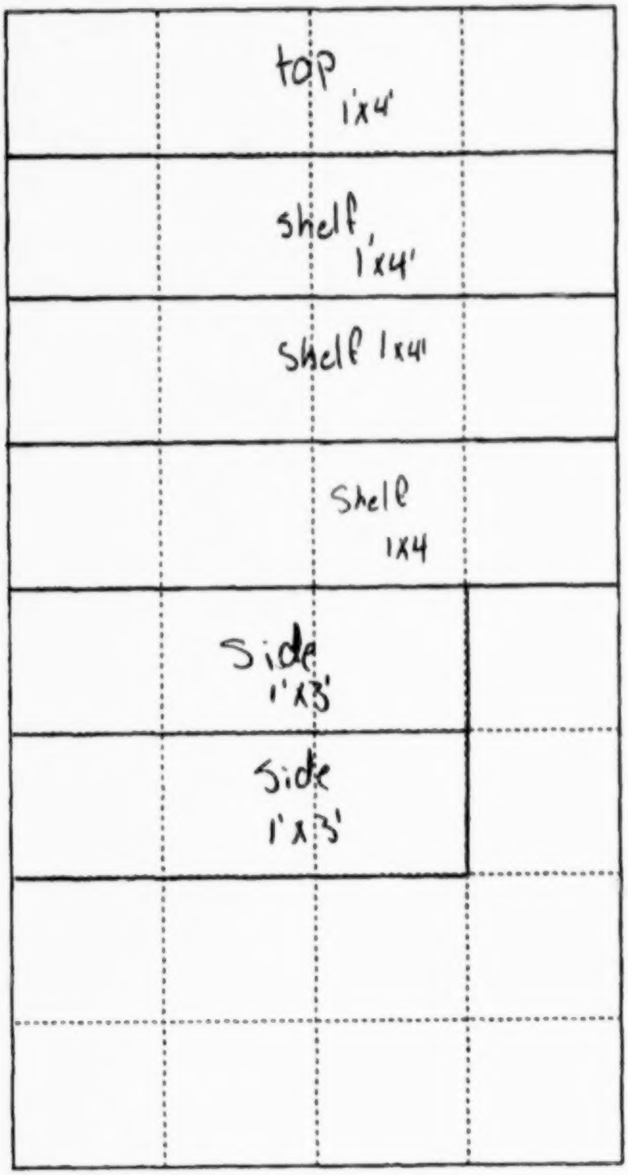
Mark 1.5 out of 2

Rationale:
- Incomplete diagram (top missing) ⚠ (½ mark)
- Error in diagram follows through to calculation of unused plywood
- Clear process and calculations to find amount unused (1 mark)

◆ Sample 2

Bill wishes to build an open-backed bookshelf. The three shelves and the top each measure 1' × 4' and the two sides each measure 1' × 3'. The pieces are cut from a single sheet of 4' × 8' plywood.

State how many square feet of plywood would be unused.



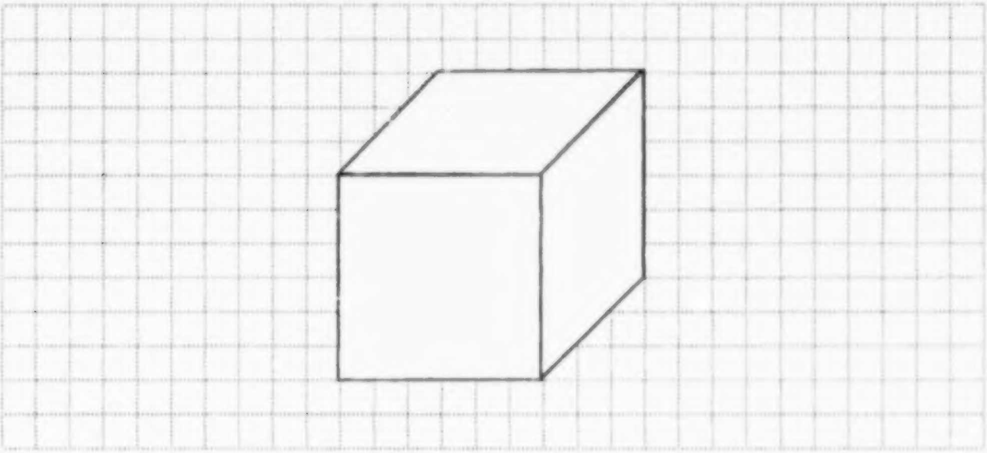
10 feet²

Mark 2 out of 2
Rationale: - Complete, labelled diagram (1 mark)
- Clear process (from diagram) to find amount unused (1 mark)

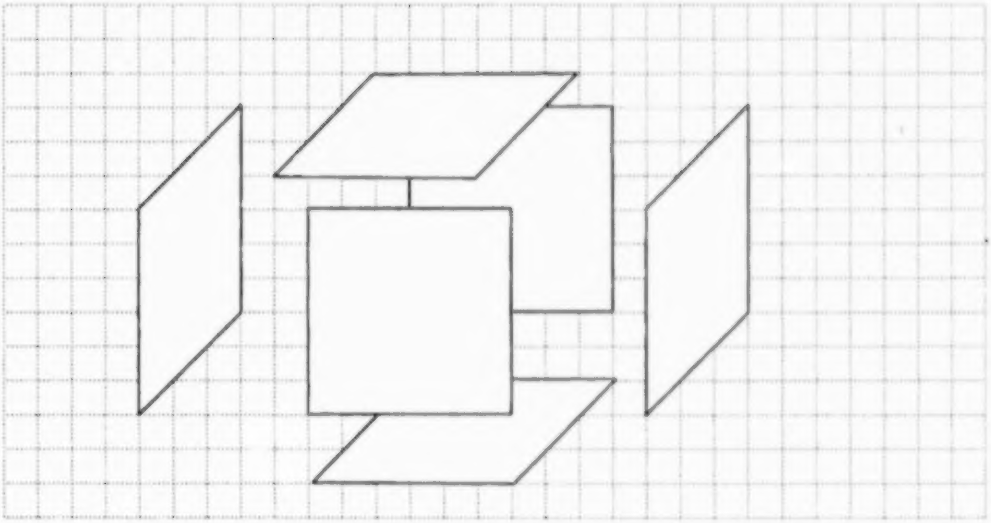
Test Item and Marking Guide

Sketch a diagram in exploded format for the six-sided cube shown below.
Use the graph paper provided.

each unit = ½ cm



Answer:



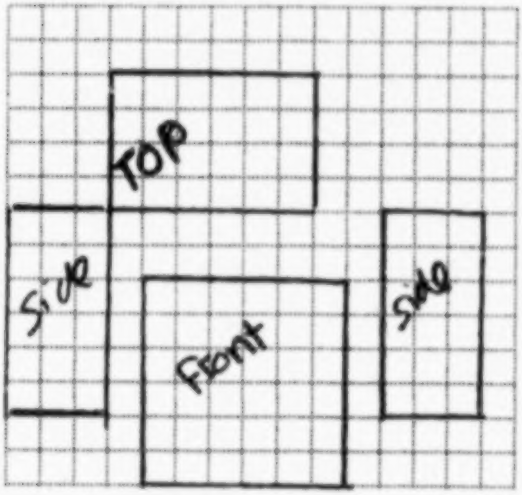
correct representation	*← 1 mark*
correct number of parts	*← 1 mark*

Question 13 Restricted Response **Design and Measurement** (2 Marks)

- **Sample 1**

Sketch a diagram in exploded format for the six-sided cube shown below.
Use the graph paper provided.

each unit = ½ cm



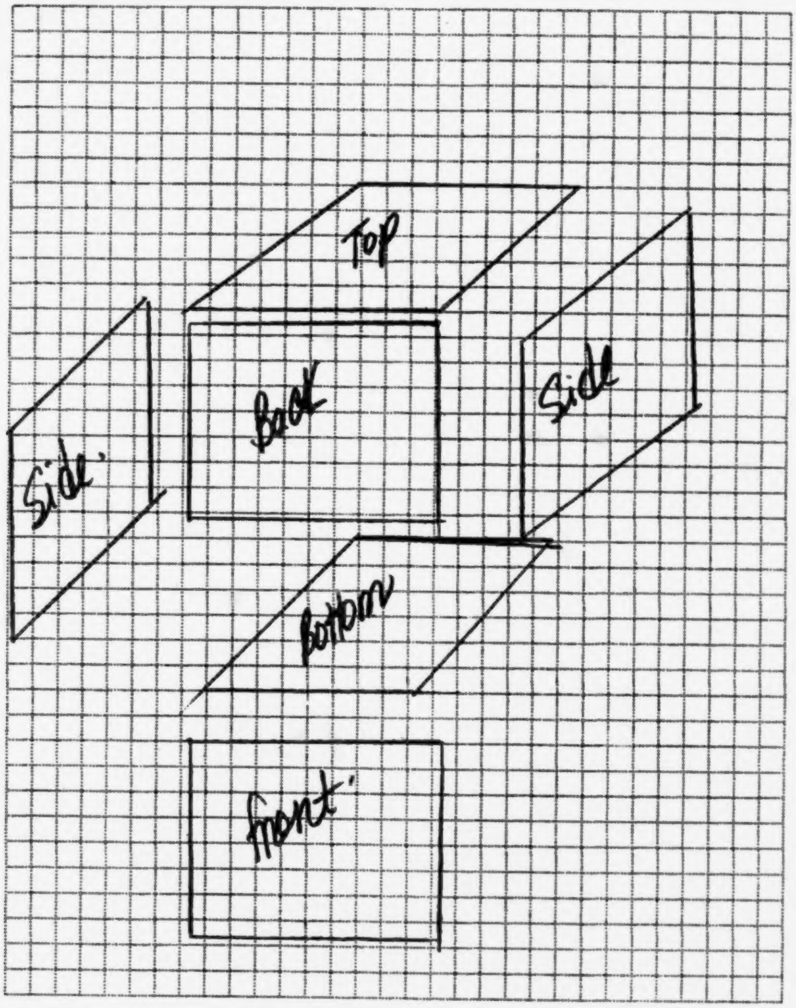
Mark 0 out of 2
Rationale: - Face views shown
- Incorrect number of parts

Question 13 Restricted Response **Design and Measurement** (2 Marks)

- **Sample 2**

Sketch a diagram in exploded format for the six-sided cube shown below.
Use the graph paper provided.

each unit = ½ cm



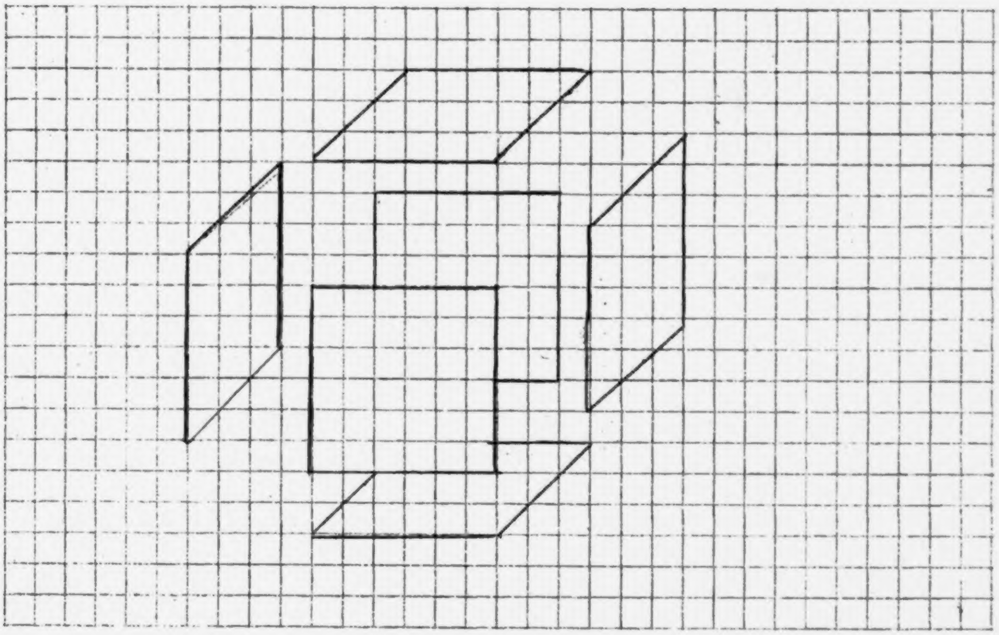
Mark 1 out of 2
Rationale: - Correct number of parts (1 mark)
- Oblique incorrectly represented

Question 13 Restricted Response **Design and Measurement** (2 Marks)

◆ Sample 3

Sketch a diagram in exploded format for the six-sided cube shown below.
Use the graph paper provided.

each unit = ½ cm



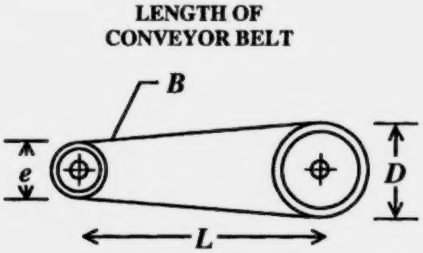
Mark 2 out of 2
Rationale: - Correct representation (1 mark)
- Six parts shown (1 mark)

Question 14 Restricted Response **Variation and Formulas** (2 Marks)

♦ Test Item and Marking Guide

The length of a conveyor belt (B) that connects to pulleys of different sizes is given by the formula:

$$B = 2L + 3.25\left(\frac{D+e}{2}\right)$$



Find the length of the conveyor belt (in centimetres) if:
$L = 114$ cm, $D = 22$ cm, $e = 18$ cm.
(Round your answer to the nearest centimetre).

Answer:

$$B = 2(114) + 3.25\left(\frac{22 + 18\text{ cm}}{2}\right) \quad \Big\} \quad \textit{substitution} \quad \leftarrow \tfrac{1}{2}\textit{ mark}$$

$$= 228 + 3.25\left(\frac{40}{2}\right) \quad \Big\} \quad \textit{computation} \quad \leftarrow \tfrac{1}{2}\textit{ mark}$$

$$\left.\begin{aligned} &= 228 + 3.25(20) \\ &= 228 + 65 \end{aligned}\right\} \quad \textit{order of operation} \quad \leftarrow \tfrac{1}{2}\textit{ mark}$$

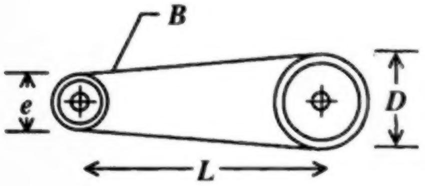
$$= 293\text{ cm} \quad \} \quad \textit{solution} \quad \leftarrow \tfrac{1}{2}\textit{ mark}$$

Question 14 Restricted Response **Variation and Formulas** (2 Marks)

◆ Sample 1

The length of a conveyor belt (B) that connects to pulleys of different sizes is given by the formula:

$$B = 2L + 3.25\left(\frac{D+e}{2}\right)$$


LENGTH OF CONVEYOR BELT

Find the length of the conveyor belt (in centimetres) if:
$L = 114$ cm, $D = 22$ cm, $e = 18$ cm.
(Round your answer to the nearest centimetre).

$$\frac{22 + 18}{2} = \frac{40}{2} = 20 \text{ cm}$$

$$117.25 \times 20\text{cm} = 2\,345 \text{ cm}$$

Mark 0.5 out of 2
Rationale:
- Partial substitution
- Follow through of substitution error (½ mark)

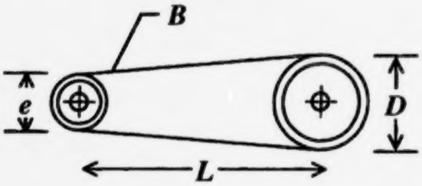
Question 14 Restricted Response **Variation and Formulas** (2 Marks)

◆ Sample 2

The length of a conveyor belt (B) that connects to pulleys of different sizes is given by the formula:

$$B = 2L + 3.25\left(\frac{D+e}{2}\right)$$

LENGTH OF CONVEYOR BELT



Find the length of the conveyor belt (in centimetres) if:
$L = 114$ cm, $D = 22$ cm, $e = 18$ cm.
(Round your answer to the nearest centimetre).

$$B = 2(114) + 3.25\left(\frac{22+18}{2}\right)$$

$$B = 228 + 3.25\left(\frac{40}{2}\right)$$

$$B = 228 + 3.25(20)$$

$$B = 228 + 65$$

$$B = 293 \text{ cm}$$

Mark 2 out of 2

Rationale:
- Correct substitution (½ mark)
- Correct solving (½ mark)
- Correct order of operations (½ mark)
- Correct solution (½ mark)

Question 15 Extended Restricted Response **Variation and Formulas** (3 Marks)

- ## Test Item and Marking Guide

Mr. Cunningham is planning a Senior 4 field trip to see a modern art exhibit.
It costs $10 per student to get into the art gallery. The fixed cost of transportation is $300.

A) Calculate the total cost of taking 25 students to the art gallery.

Answer: $25 \times 10 + 300 = \$550$ ← ½ mark

B) Identify the type of variation in the cost of the trip.

Answer: *partial variation* ← *½ mark*

C) Express this variation as an equation substituting the field trip information and using the variables:

C = total cost
n = number of students

Answer: $C = \underset{\substack{\uparrow \\ \text{½ mark}}}{300} + \underset{\substack{\uparrow \\ \text{½ mark}}}{10n}$ *or* $\underbrace{C = F + Kn}_{\text{½mark}}$ ← *1 mark*

$$\underbrace{C = 10n + 300}_{\text{½mark}}$$

D) Calculate the number of students on the trip if the trip costs $720.

Answer: $720 = 300 + 10\,n$ ← *½ mark*
$n = 42$ ← *½ mark*

Question 15 Extended Restricted Response **Variation and Formulas** (3 Marks)

◆ Sample 1

Mr. Cunningham is planning a Senior 4 field trip to see a modern art exhibit.
It costs $10 per student to get into the art gallery. The fixed cost of transportation is $300.

A) Calculate the total cost of taking 25 students to the art gallery.

550

B) Identify the type of variation in the cost of the trip.

fixed cost + (Ticketcost X Number of students)

C) Express this variation as an equation substituting the field trip information and using the variables:

C = total cost
n = number of students

300+(10X N

D) Calculate the number of students on the trip if the trip costs $720.

720-300=420-10= 42

Mark 2 out of 3
Rationale:
- Accurate calculation for Part A (½ mark)
- Incorrect identification for Part B
- Accurate substitution of 300 for Part C (½ mark)
- Accurate solution for Part D (½ mark × 2)

- **Sample 2**

Mr. Cunningham is planning a Senior 4 field trip to see a modern art exhibit.
It costs $10 per student to get into the art gallery. The fixed cost of transportation is $300.

A) Calculate the total cost of taking 25 students to the art gallery.

$10 \times 25 = 250 + 300 = 550$

B) Identify the type of variation in the cost of the trip.

Partial

C) Express this variation as an equation substituting the field trip information and using the variables:

C = total cost
n = number of students

$C = F + kn \quad 550 = 300 + 10(25)$

D) Calculate the number of students on the trip if the trip costs $720.

$720 = 300 + 10n$

$720 - 300 = \frac{420}{10} = \underline{42}$

Mark 3 out of 3
Rationale:
- Accurate calculation for Part A (½ mark)
- Correct identification for Part B (½ mark)
- Accurate substitution of 300 for Part C (½ mark × 2)
- Accurate solution for Part D (½ mark × 2)

Question 16 Open Response **Investments** (1 Mark)

Test Item and Marking Guide

State the meaning of "rate of return" in terms of financial investments.

Answer: *The amount of money lost or gained by an investment expressed as a percent.*

DEDUCTION TO TOTAL SCORE:

Students omitting the recognition of rate as a percent or ratio earn a maximum ½ mark.

Question 16 Open Response **Investments** (1 Mark)

Sample 1

State the meaning of "rate of return" in terms of financial investments:

It's the amount of money you get back after
you invest it.

Mark 0.5 out of 1

Rationale:
- Recognition of concept of rate of return
- No recognition of percent of money lost or gained (½ mark)

Question 16 Open Response **Investments** (1 Mark)

◆ **Sample 2**

State the meaning of "rate of return" in terms of financial investments:

Rate of return is the percentage of the money you invested that you earned or lost.

Mark 1 out of 1
Rationale: - Concept evident (1 mark)

Question 17 Open Response **Investments** (2 Marks)

◆ Test Item and Marking Guide

A) Define the term "stocks" in terms of investments. ← *1 mark*

Answer:
- *Stocks entitle the owner to share in the profit of a company*
- *You become a part-owner of a company*

B) Describe how stocks are bought and sold. ← *1 mark*

Answer:
- *stock market*
- *commission to brokers*
- *concept of dividends*
- *online sales*

"Buy low, sell high" no value

Question 17 Open Response **Investments** (2 Marks)

- **Sample 1**

A) Define the term "stocks" in terms of investments.

There are a number of ways to buy and
sell stocks

B) Describe how stocks are bought and sold.

The most common is a broker

Mark 1 out of 2
Rationale: - Identification of one way stocks are bought and sold (1 mark)

Question 17 Open Response **Investments** (2 Marks)

- **Sample 2**

A) Define the term "stocks" in terms of investments.

Shares in a company stocks are bought on the stock market

B) Describe how stocks are bought and sold.

Either you hire a stockbroker or you
do it yourself. You pay the amount that
a company asks for each share in the
company. To sell you sell off your own
share and keep the money.

Mark 2 out of 2
Rationale: - Concept of stocks/shares evident in Part A (1 mark)
- Clear explanation of buying and selling stocks for Part B (1 mark)

Question 18 Extended Restricted Response **Investments** (3 Marks)

♦ Test Item and Marking Guide

Mary has a $100 000 insurance policy that has a cash surrender value of $26 000. She owns a home valued at $126 000 with a mortgage of $66 000. She has $14 000 in Canada Savings Bonds and drives a Chevrolet Malibu valued at $22 000. She owes $12 000 on the car and her credit card debt is $4 600.

A) List Mary's assets and liabilities based on the above information.

Assets	Liabilities
26 000	
126 000	66 000
14 000	
22 000	12 000
	4 600

↑ *½ mark* ↑ *½ mark*

B) Calculate Mary's net worth.

Answer: *Net Worth = Assets – Total Liabilities* *½ mark*
Net Worth = 188 000 – 82 600
Net Worth = $105 400

C) Calculate Mary's debt equity ratio.

Answer: $$DER = \frac{(12\,000 + 4\,600 + 66\,000) - 66\,000}{105\,400} \times 100 =$$ *substitution* ← *½ mark*

$$\frac{82\,600 - 66\,000}{105\,400} = \frac{16\,600}{105\,400} = .157 \times 100$$ *computation* ← *½ mark*

$$= 15.7\% \text{ or } = 16\%$$ *solution* ← *½ mark*

Question 18 Extended Restricted Response **Investments** (3 Marks)

◆ Sample 1

Mary has a $100 000 insurance policy that has a cash surrender value of $26 000. She owns a home valued at $126 000 with a mortgage of $66 000. She has $14 000 in Canada Savings Bonds and drives a Chevrolet Malibu valued at $22 000. She owes $12 000 on the car and her credit card debt is $4 600.

A) List Mary's assets and liabilities based on the above information.

ASSETS	LIAB
100,000	66 000
126,000	26000
14 000	12 000
22 000	4 600
362 000	108 600

B) Calculate Mary's net worth.

ASSETS - TOTAL LIABILITIES = NET WORTH

$362000 - 108600 = \boxed{\$253400}$

HER NET WORTH IS
$253400.

C) Calculate Mary's debt equity ratio.

$$DER = \frac{\text{TOTAL LIABILITIES} - \text{MORTGAGE}}{\text{NET WORTH}} \times 100 =$$

$$DER = \frac{108600 - 66000}{253400} \times 100 =$$

$$DER = \frac{42600}{253400} \times 100$$

$$\boxed{DER = 16.8\ \%}$$

Mark 2 out of 3

Rationale:
- Assets and liabilities listed in Part A with minor error (½ mark)
- Error from Part A carried through in substitution for Part B. Correct use of net worth formula (½ mark)
- Correct substitution and solving for Part C (½ mark × 2)
- Incorrect solution

Question 18 Extended Restricted Response **Investments** (3 Marks)

◆ Sample 2

Mary has a $100 000 insurance policy that has a cash surrender value of $26 000. She owns a home valued at $126 000 with a mortgage of $66 000. She has $14 000 in Canada Savings Bonds and drives a Chevrolet Malibu valued at $22 000. She owes $12 000 on the car and her credit card debt is $4 600.

A) List Mary's assets and liabilities based on the above information.

B) Calculate Mary's net worth.

26000 + (126000 − 66000) + 14000
100 000 + (22000 − 12000)
110 000 − 4600
105400

$$DER = \frac{82600 - 66000}{105400} \times 100$$

C) Calculate Mary's debt equity ratio.

15.75 %

Mark 2 out of 3

Rationale:
- Assets and liabilities not listed for Part A
- Correct calculation of net worth in Part B (½ mark)
- Correct substitution and solving for Part C (½ mark × 2)
- Correction solution for Part C (½ mark)